ADDENDUM 1

City of El Segundo
Public Works Department
Stephanie Katsouleas, Director

October 06, 2010

FILE COPY

ADDENDUM NO. 1
to
THE CONTRACT DOCUMENTS, SPECIFICATIONS AND PLANS
for
CONSTRUCTION OF A NEW BEACH BATHROOM FACILITY
AND LIFEGUARD STATION AT EL SEGUNDO BEACH
PROJECT NO.: PW 10-09

ATTENTION BIDDERS:

The following additions, modifications, and clarifications to the specifications shall be included in, and become a part of any contract which may be executed for the above project in the City of El Segundo:

1. **Replace or add the applicable pages in the Special Provisions Section dated 10/06/2010.**
2. **Replace or add the revised sheets in the plans dated 10/06/2010.**

As evidence that the BIDDER has read this Addendum, the BIDDER must acknowledge same in the space provided below and submit this Addendum with the Bid Proposal. Failure to acknowledge this Addendum may cause rejection of bid.

_____ _____
(signature) (date)

350 Main Street, El Segundo, CA 90245-3895

SECTION 00 0110

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SECTION 04 2000

CONCRETE MASONRY UNITS

PART 1 GENERAL

1.01 DESCRIPTION

A. Section Includes: Provision of concrete masonry work, including but not limited to, masonry units, mortar, grout, reinforcing steel, control joints, testing and inspection.
   1. Related Sections:
      a. Section 03 2000 - Concrete Reinforcement
      b. Section 03 3000 - Cast-in-Place Concrete
      c. Section 05 1200 - Structural Steel

1.02 REFERENCES

A. Requirements of the General Conditions and Division No. 1 apply to all Work in this Section.

B. Published specifications, standards, tests or recommended methods of trade, industry or governmental organizations apply to Work in this Section where cited by abbreviations noted below (latest editions apply).
   1. California Building Code (CBC), 2007 Edition.
   2. American Concrete Institute's "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315).
   3. American Society for Testing and Materials (ASTM).
   4. "Specifications for Masonry Structures", ACI 530.1/ASCE6/TMS602.

1.03 QUALITY ASSURANCE

A. All masonry work shall comply with the standards and requirements of the above references. Where discrepancies exist between the references and the Contract Documents, the requirements of the Contract Documents shall govern.
   1. Allowable Tolerances:
      a. Unit masonry shall be placed within 1/8-inch of dimensions noted.
      b. The maximum variation from plumb of walls shall be 1/8" in 20 feet.
      c. Joints shall have a uniform thickness of 3/8" unless otherwise noted. Joints shall not vary more than 1/16" in adjacent courses within two feet and shall not be less than 5/16" thick and not greater than 7/16" thick.
   2. Reinforcing Steel:
      a. Reinforcing steel shall not be permitted to rust where there is danger of staining exposed surfaces of adjacent concrete.
      b. The Contractor shall replace rust-stained concrete and/or masonry at his expense.

B. Examination Criteria: All examinations, selections and approval shall be for the purpose of achieving a final installation of the unit masonry with the greatest possible uniformity of appearance and structural integrity based on the following criteria:
   1. Testing and quality assurance measures outlined in this specification.
   2. Color and texture shall match the approved sample for range, random variation and finish. The quality of construction shall match the approved mock-up.
   3. Conformance to the contract documents and approved shop drawings within specified dimensions and tolerances.
   4. Only one source for concrete masonry units shall be used throughout the work.
   5. Other criteria as specified in this Section.
   6. Non-conformance with any or all of the above criteria shall be grounds for removal and replacement of the work without expense to the Owner. The Architect shall determine if the work complies with the above criteria.

1.04 QUALITY ASSURANCE

A. The Owner's Testing Agency will:
   1. Collect plant certificates from the Contractor for concrete masonry units, stating that all units have been properly cured before shipment and that they conform to all the requirements of these specifications. All masonry units shipped without certification will be rejected.
   2. Field test masonry unit moisture content prior to block installation. See Section 3.7, Field Quality Assurance.

1.05 SUBMITTALS

A. Manufacturer's literature: Submit manufacturer's literature describing products, including mix designs, history of compression tests, and mixing requirements as they apply to each different masonry unit, accessory and other manufactured product to be used in the unit masonry construction. Literature shall include, but not be limited to, preformed rubber control joints and all additives.
   1. Certificates:
      a. Submit material certificates for the following signed by the manufacturer and the Contractor certifying that each material complies with requirements designated.
         1) Each material and grade of reinforcing bars. See Section 03 2000, Concrete Reinforcement.
         2) Each type and size of anchors, inserts, ties and accessories.
      b. The Contractor shall submit a certificate of compliance with the standards designated.
      c. Submit plant certificates for all concrete masonry units to the Owner's Testing Agency and Architect, stating that all units have been properly cured before shipment and that they conform to all requirements of these specifications, including but not limited to, requirements for moisture content per ASTM C90 Type 1 units.

B. Mix Designs: Submit mix designs for mortar and grout, and history of compression tests. Submit manufacturer's literature for grout admixtures.

C. Unit Samples: Submit sample concrete masonry units in each color and texture combination specified.

D. Samples: Submit samples of all accessories embedded in masonry.

E. Mill Test: Submit mill test reports for all reinforcing steel.

F. Extreme Weather Procedures: Submit cold and hot-weather construction procedures evidencing compliance with requirements specified in ACI 530.1 and these specifications.

G. Shop Drawings: Coordination and shop drawings for all concrete masonry unit walls. Drawings shall consist of elevations and sections indicating materials and assembly, color surface finish, courses and reinforcing.
   1. The shop drawings shall illustrate detailing, fabrication, bending and placement of unit masonry reinforcing bars. Comply with ACI 315 showing bar schedules, stirrup spacing, diagrams of bent bars and arrangements of masonry reinforcement. The shop drawings shall also indicate the location of all conduit, plumbing and other items embedded in unit masonry walls and coordinate this work with the placement of the unity masonry reinforcement.
   2. All shop drawings shall be drawn to scale.

H. Test Reports: Submit material test reports indicating and interpreting test results relative to compliance with the tests described in this Section and Section 3.7 Field Quality Assurance.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver and store packaged material in original containers with seals unbroken and labels intact until time of use.

B. At the time of delivery to the site, masonry units shall conform to the moisture requirements of ASTM C90 Type I, Table 1. In addition, masonry units shall also meet the moisture requirements during laying of units and grouting until the wall is complete.

C. Unload and inspect each masonry unit carefully and store on raised platform protected from weather so as to meet ASTM C90 Type I requirements at the time of laying and grouting. Reject and remove from the site all material not conforming to specification requirements. In addition to lack of conformance to manufacturers' specifications, masonry units shall be rejected if:
   1. The color or texture of the concrete masonry units deviates from the range of colors and textures displayed on approved mock-up, as determined by the Architect.
   2. Concrete masonry units that are chipped, crack or otherwise damaged.
   3. Protect cementious materials against exposure to moisture.
      a. Use of cementious or other materials that have become caked and hardened from absorption of moisture will not be permitted.

D. Prior to installation, unload concrete masonry units onto working pallets as described in Section 3.2, D.

1.07 JOB CONDITIONS

A. Environmental Conditions:
   1. Do not place unit masonry when temperature is below 40 degrees Fahrenheit, unless the Architect approves and the Contractor provides means for preventing damage from freezing before and after placement.

B. Protection:
   1. Protect surrounding work as required against damage from masonry work.
   2. Clean satisfactorily and correct damage to surrounding work resulting from masonry work.
   3. The contractor shall take all means and precautions necessary to protect masonry units from moisture absorption during shipping, storage on site, placement prior to grouting of wall, during wall construction until the masonry wall is completed and water repellant coating is applied.

PART 2 PRODUCTS

2.01 MATERIALS

A. Hollow Load-Bearing Concrete Masonry Units: As manufactured by Angeles, Orco, Basalite, Calstone or approved equal. Medium weight open end type concrete block conforming to ASTM C90, Type I (0.060 maximum allowable linear shrinkage with a maximum moisture of 35%, as a percentage of total absorption). Provide compressive strength indicated on drawings. Provide wall caps and accessories where necessary. Wall caps and accessories to be medium weight and match color and finish of host wall.
   1. Lifeguard Structure Walls: Angelus Block Charcoal, burnished multiple sides where exposed to the exterior.
   2. Shower and Retaining Walls: Angelus Block Midnight, burnished multiple sides where exposed to the exterior.
   3. Portland Cement: ASTM C150, Type II.
   4. Aggregates:
      a. For Mortar: ASTM C144.
      b. For Grout: ASTM C404.
   5. Hydrated Lime; ASTM C207, Type S.

6. Quick Lime: ASTM C5.
7. Reinforcing Bars:
   a. Bars: New billet steel, ASTM A615, Grade 60.
   b. Tie Wires: ASTM A82.
   c. Comply with the requirements of Section 03 2000, Concrete Reinforcement.

B. Water: Clean and potable, free from impurities detrimental to mortar and grout.

C. Control Joints: Preformed rubber in profiles required or shown. Same as Sonneborn-Contech's "Masonry Control Joints"; Dur-O-Wal National Inc.'s "Rapid Control Joint"; or equal product substituted per Section 01 6000.

D. Mortar Coloring: Mineral oxide type.

E. Additives and Admixtures: Required in all grout to reduce early water loss to the masonry units and produce expansive action in the plastic grout to offset the initial shrinkage and promote bonding of grout to the interior masonry unit surfaces. Use Grout Aid by W.R. Grace or approved equal. Obtain approval of admixture by Architect, Structural Engineer and Owner's Testing Agency.

F. Water Repellant Coating: As specified in Section 07 1900, Water Repellant Coating.

2.02 FABRICATION

A. Concrete Masonry Units: Blocks shall have been air cured for not less than 28 days.

B. Reinforcement:
   1. Shop-fabricate to comply with Drawings.
   2. Conform with requirements of ACI 315 where specific details are not shown or where Drawings and Specifications are not more demanding.

2.03 MIXES AND MIXING

A. Mortar:
   1. Conform to ASTM C270, Type M or S, per plans.
      a. Compressive Strength: Minimum 2,500 psi after 28 days.
      b. Proportions by Volume: One part Portland cement, one-quarter to one-third part hydrated lime, and two and three quarters parts aggregate.
   2. Use Angelus Block premixed mortar. Site mixing of mortar shall not be premitted without review and acceptance of Contractor's procedure by the Owner's Testing Agency and the Structural Engineer.
      a. Color of mortar to match the masonry and to be selected by the Architect from all available colors.
   3. Add lime and continue mixing as long as required to secure a uniform mass.
   4. Total mixing time may not be less than 3 minutes or more than 10 minutes.
   5. Use and place mortar in final position within 2½ hours after mixing.
      a. Mortar that have stiffened as a result of evaporation of water may be re-tempered with water as frequently as required to restore required consistency during this time period.

B. Grout: Site mixing of grout shall not be permitted without review and acceptance by the Structural Engineer.
   1. Compressive Strength: Minimum 2,000 psi after 28 days.
   2. Slump: 9- to 10-inches.
   3. Proportions by Volume: Shall be per CBC 2103.13 or Table 2103.12.
   4. Use grout aid in all grout to reduce early water loss to the masonry units and produce an expansive action in the grout sufficient to offset initial shrinkage. Mix grout admixture in accordance with the manufacturer's recommendations and requirements.
   5. Grout to comply with requirements of CBC 2103.12 for materials and mix requirements.

6. Use sufficient water to make a workable mix that will flow into all joints of the masonry units with typical rates of absorption for ASTM C90 Type I units. The slump of the grout should be approximately 9 to 10 inches depending on temperature and humidity conditions.
7. General Mixing Requirements:
   a. Measure materials accurately.
   b. Shovel measurements will not be permitted.
   c. Use mechanical mixer of at least one-sack capacity.
   d. Completely empty drum before charging succeeding batch of materials.
   e. Exercise extreme care in measuring ingredients for partial batches.

2.04 SOURCE QUALITY CONTROL

A. The Owner's Testing Agency will:
   1. Collect mill test reports for reinforcements under Section 1.4.
   2. Sample and test concrete masonry units for compressive strength, unit weight, absorption and moisture content in accordance with ASTM C140.
      a. Compressive strength tests of units shall also comply with CBC 2105.2.2.1.
   3. Test for moisture content and drying shrinkage in accordance with ASTM C426.

PART 3 EXECUTION

3.01 INSPECTION

A. Examine areas to receive masonry and verify the following:
   1. Foundation surface is level to permit bed joint within range of 1/4- to 3/4-inch.
   2. Edge is true to line to permit projection of masonry to less than 1/4-inch.
   3. Projecting dowels are free from loose scale, dirt, concrete, or other bond-inhibiting substances and properly located.
   4. Do not begin before unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Clean concrete surfaces to receive masonry.

B. Remove laitance or other foreign material lodged in surface by sandblasting or other means as required.

C. Ensure masonry units are clean and free from dust, dirt, or other foreign materials before laying.

D. Roughen concrete below walls to expose aggregate; remove loose particles and in hot weather, dampen concrete surfaces before laying blocks. Contact surfaces of all foundations and floors that are to receive masonry work are to be mechanically roughened to 1/4" amplitude.

3.03 REINFORCEMENT

A. Place bars where noted in accordance with ACI 315 and do not disturb after start of masonry placement.
   1. All horizontal reinforcement shall be laid in bond beam units.

B. Minimum clearance between bar and CMU is 1/2-inch and between parallel bars is 1-inch.

C. Horizontal and vertical reinforcing shall be held in position by wire positioners or spacing devices near ends and at intervals not to exceed 200 bar diameters, and as required to prevent displacement by construction loads or placement of grout beyond the tolerances allowed by CBC 2104.1.

3.04 PLACEMENT

A. General Requirements:
   1. Ensure masonry units are sound, clean and free of cracking, chipping and broken edges at

time of placement.

2. Accurately cut and fit units as required to accommodate other work using masonry saws.
3. Lay masonry units plumb, true to line, with level courses accurately placed.
4. Adjust unit to final position while mortar is soft and plastic.
5. Align vertical cells accurately.
6. Remove units disturbed after stiffening of mortar, clean joints, and relay unit with fresh mortar.
7. In hot weather, moisten contact surfaces of the masonry units to receive mortar immediately before laying to prevent excessive drying of mortar.
8. Do not lay up one tier of wall more than 16-inches ahead of other tier.
9. Where necessary to stop longitudinal run, rack back one-half block length in each course.
10. Do not attach construction supports to walls, except where permitted by the Architect.
11. Install anchors, bolts, and other embedded items accurately as work progresses and prior to grouting.
12. Masonry installer and reinforcing steel installer shall meet and coordinate placement of reinforcing steel prior to placement of concrete or grout.

B. Joints:
   1. Fill joints to thickness noted: ensure full coverage of face shells in both horizontal and vertical joints and on webs.
   2. Tool joints as specified on the drawings and achieve solid, smooth, watertight, compacted joints.
   3. Joints Exposed to Weather: Point with pointing tools making solid, smooth, watertight joint well bonded to masonry at edges.
   4. Immediately fill holes made by line pin with mortar when pin is withdrawn.
   5. Remove surplus mortar from joints.

C. Cold Weather Requirements:
   1. When daily temperature is below 40 degrees F., ensure reinforcing, masonry units, etc., contacting mortar, and grout are free of frost.
   2. Protect all mortar and grout from freezing for at least 48 hours after installation whenever temperature falls below 40 degrees F.
   3. Maintain mortar and grout at temperature no lower than 50 degrees F., while being used and until installed.
   4. In freezing or near freezing weather, provide equipment of adequate size for heating of mortar and grout.
   5. Do not add water to mix at temperature greater than 140 degrees F.
   6. Hot Weather Requirements:
      a. Implement the requirements of approved Hot Weather construction procedures when ambient air temperature exceeds 100 degrees F or 90 degrees F with a wind velocity greater than 8 mph.
   7. Protection:
      a. Protect face materials against staining.
      b. Remove misplaced grout or mortar immediately.
      c. Protect sills, ledges, offsets, and similar items from mortar drippings or other damage during construction.
   8. Requirements for Walls to be Grouted by High-Lift Method:
      a. Lay up walls full story prior to grouting. Brace walls adequately to resist wind lateral and other forces.
      b. Build vertical grout barriers or dam of solid masonry across grout space at no more than 25-feet on centers to control horizontal flow of grout.
      c. Provide cleanouts by leaving out every other unit in bottom course; seal after inspection and before grouting. Face shell plugs shall have a 24 hour cure time and be adequately braced to resist grout pressure.

d. During laying up, remove mortar fins and other foreign matter from grout space with stick and compressed air.
e. Grout shall be a high slump workable mix placed by pumping.
f. Use mechanical vibrators for consolidation.
g. Grout is to be reconsolidated after it has taken on a plastic consistency but prior to taking on initial set.
h. A "pour" is considered as the entire height of grout fill placed in one day and is composed of a number of successive placed grout lifts. A "lift" is the layer of grout placed in a single continuous operation.
i. Maximum height of pour will be twelve feet for eight inch walls, sixteen feet for twelve inch walls.

9. Concrete Masonry Units:
   a. Bond: Running bond, unless specifically noted otherwise.
   b. Joint Thickness: 3/8-inch, both vertically and horizontally.
   c. Joint Treatment:
      1) Where exposed, all mortar joints shall be tooled joints.
      2) Where concealed, cut off mortar flush with face of work using trowel.
   d. Use proper units to provide for windows, doors, bond beams, lintels, pilaster, etc., in order to minimize cutting.
   e. Do not wet units.
   f. Align vertical cells to provide continuous, unobstructed opening for grouting.
   g. Corners: Provide standard masonry bond by overlapping units.

3.05 GROUTING

A. General Requirements:
   1. Use high-lift or low-lift grouting, at the Contractor's option. Do not pour grout until mortar has set and cured, 36 hours minimum. Grout walls as soon as possible after mortar has cured.
   2. Grout voids between wythes and cells of concrete block.
   3. Ensure grout flows into voids and completely surrounds reinforcing steel.
   4. Stop grout approximately 1-1/2 inches below top of last course (1/2" at bond beams with horizontal steel), except at top course, bring grout flush with top of block.
   5. Grout from inside face of masonry wherever possible.
   6. Where necessary to stop longitudinal run, provide suitable dam to retain grout in place.
   7. Do not wet down grout spaces prior to grouting.

B. Low-Lift Grouting:
   1. Pour grout to a maximum height of 4-feet, stopping 1-1/2-inches below top of unit except at bond beam units with horizontal steel the grout shall be stopped 1/2-inch below top of unit.
   2. Delay 3 to 5 minutes allowing the excess of water to be absorbed by the masonry unit, then consolidate by vibrating.
   3. Layup and grout next 4-feet of walls.

C. High Lift Grouting
   1. Ensure cleanout has been sealed before grouting.
   2. Pour first lift to a depth not in excess of 4 feet, with a waiting period between subsequent lifts of thirty to sixty minutes, sufficient to permit grout to become plastic but not set.
   3. Place the first lift of grout to a uniform height, wait 3 to 5 minutes, and mechanically vibrate thoroughly to fill all voids. Subsequent lifts should be poured and alternate cells vibrated twelve inches to eighteen inches into the preceding lift.
   4. Complete pour in sequence with other lifts not in excess of 4 feet.
   5. If grout pour is 6-feet or less, it may be placed in one lift. If total pour exceeds 6-feet, the grout shall be placed in 4-foot lifts.

6. Grouting operations shall be conducted such that pours are limited to successive lifts which can be placed within one hour of the preceding lift.
7. Reconsolidate the top lift after the required waiting period to fill any space left by settlement and shrinkage.
8. Repeat the waiting, pouring, and reconsolidation steps until the top of the day's pour is reached.
9. Construction Joints: In the high lift grouting method, intermediate horizontal construction joints are not permitted. Plan the work for one continuous pour of grout to the top of the wall in four foot layers or lifts in the same working day. Should a blow-out, equipment breakdown, or any other emergency occur, cease the grouting operation. An alternate procedure may be used with the approval of the Architect or Structural Engineer.
10. The section of wall to be grouted in any one pour is limited to a length in which successive lifts can be placed within one hour of the preceding lifts. Vertical control barriers shall be placed between pour sections in locations approved by the Architect or Structural Engineer.

3.06 POINTING AND CLEANING

A. Point holes or defective mortar joints upon completion of work; where necessary, cut out and repoint defective joints.

B. At end of work day, fiber-brush new surfaces to remove mortar splotches, clean with mild detergent or enzymes, and rinse with clean water.

C. Do not use acid solution to remove green stain or efflorescence resulting from salts; follow recommendations of manufacturer for removal of such stains.

D. Upon completion of work, remove from site surplus materials, rubbish, and debris resulting from this work.

3.07 FIELD QUALITY ASSURANCE

A. Special Inspection:
   1. The Owner shall employ an approved, qualified masonry inspector to perform continuous masonry inspection per CBC 1704. Acceptance by a State or Municipality having a program of examining and certifying masonry inspectors will be considered adequate qualifications. The masonry inspector shall be at the site during all masonry construction and perform the following duties:
   2. Review plans and specifications and meet with the Contractor to discuss requirements before work commences.
   3. Before masonry work commences, meet with the Contractor and the Architect in a joint meeting to review the requirements for surveillance and quality control of the masonry work.
   4. Check brand and type of cement, lime (if used) and source of sand.
   5. Inspect the foundation or slab to ascertain that it is clean and ready to receive units.
   6. Check reinforcing steel dowels for straightness, proper alignment, spacing, size and length.
   7. Observe manner in which units are laid up to ensure that joints are full of mortar and kept tight during work. Inspect cells to assure that fins will not interfere with grouting or foaming. Instruct masons to keep cells clean of mortar droppings and inspect to determine compliance.
   8. Observe placing of grout continuously.
   9. Perform or supervise performance of required sampling and field testing as specified.
   10. Keep complete record of inspection of work. Report daily to the Owner's Representative the progress of the masonry inspection.

B. Prism Test: The Owner's Testing Agency will perform prism testing in accordance with CBC Section 2105. Prior to construction, a set of 5 masonry prisms shall be built and tested using materials taken from those specified for this project. During construction test 3 prisms for each 5,000 sq. ft. of wall area and as additionally required by the Architect.

C. Mortar and Grout Testing: The Owner's Testing Agency shall verify that mortar complies with the requirements of CBC 2103.8 and CBC Table 2103.8. - compressive strength tests shall be performed on grout, one test for each 5,000 square feet of wall area. Test mortar and grout in accordance with CBC 2105.2.

D. Masonry Core Tests: When required by the Owner or Architect, the Owner's Testing Agency shall take and test masonry cores in accordance with CBC. Take cores in locations designated by the Architect. Contractor shall restore walls with whole face shells or complete units as approved by the Architect. One half of the cores shall be tested for bond strength at the joint between the masonry and the grout.

END OF SECTION

SECTION 07 4113

METAL ROOF PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Architectural roofing system of preformed zinc panels.

B. Fastening system.

C. Accessories and miscellaneous components.

1.02 RELATED REQUIREMENTS

A. Section 07 4213 - Metal Wall Panels: Preformed wall panels.

B. Section 07 9005 - Joint Sealers: Field-installed sealants.

1.03 REFERENCE STANDARDS

A. Rheinzink Application in Architecture, 2nd Updated Edition, January 2002.

B. SMACNA - Architectural Sheet Metal Manual; 2003 Edition

1.04 DESIGN REQUIREMENTS

A. Panel roofing sheets shall be designed and erected to provide an insulated deck 'warm roof' assembly.

B. Thermal Movement: Provide systems and connections, which allow for thermal movement resulting from ambient temperature range of 100 degrees F without causing harmful buckling, failure of joint seals, undue stress on fasteners or other detrimental effects.

C. Structural Performance: Provide panels, anchors and attachments, which resist loads required by local jurisdiction as noted on the Structural Plans to withstand positive and negative pressure resulting from wind loading.
   1. Panel roofing clips and fasteners shall be corrosion resistant.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
   1. Shop drawings are to be reviewed by zinc manufacturer prior to submission to the Architect and be accompanied by letter stating review and/ or review stamp directly on the shop drawings.
   2. Show work to be field-fabricated or field-assembled.

C. Verification Samples: For each roofing system specified, submit samples of minimum size 12 inches (305 mm) square, representing actual roofing metal, thickness, profile, color, and texture.

D. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in the manufacture of roofing systems similar to those required for this project, with not less than 10 years of experience.

B. Source: Provide roof panels, which are the product of one manufacturer. Provide secondary materials, which are acceptable to the zinc manufacturer.

C. Fabricator Qualifications: Company specializing in fabricating and working with materials specified in this section with a minimum five years experience.
   1. Metal Tech-USA; 770 486.8825; www.metaltech-usa.com
   2. Morin Corporation; 800 700.6140; www.kingspanpanels.us
   3. Firestone Metal Products; 858 603.1186

D. Installer Qualifications: Company specializing in performing the work of this section with minimum five years of experience. Installer to provide installation of panels, underlayment and attachments to substructures.
   1. Tinco Sheet Metal; 323 263.0511
   2. California Sheet Metal; 619 562.7010
   3. Weiss Sheet Metal; 310 354.2700
   4. C & J Sheet Metal; 562 634.8823

1.07 DELIVERY, STORAGE, AND HANDLING

A. Provide strippable plastic protection on prefinished roofing panels for removal after installation.

B. Store roofing panels on project site as recommended by manufacturer to minimize damage to panels prior to installation.

C. Prevent contact with materials that may cause discoloration or staining of products.

1.08 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Material Warranty: Provide manufacturer's 10 year warranty covering material defects as required by DIN 988 for rolled zinc.

C. Installation Warranty: Provide 5 year warranty covering defects in installation performance resulting from faulty installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Zinc Alloy Sheet/ Coils
   1. Titanium Zinz Alloy whose base is electrolytic high grade fine zinc (DIN EN 1706) with a 99.995% Zn degree of purity and alloying additives of 1% copper and 1% titanium in accordance with DIN EN 988.
      a. Finish: Preweathered Blue Gray, with factory applied blue backside paint coating.
         1) Exposed surface coatings (phosphate or others) are not acceptable.
      b. Shape: Double Standing Seam
      c. Minimum Panel Thickness: 0.7mm
      d. Custopm copings and related sheet metal work fabricated from zinc, copper and titanium alloy sheet.

B. Acceptable manufacturers are:
   1. Rheinzink America: www.rheinzink.com.

C. Substitutions: See Section 01 6000 - Product Requirements.

2.02 ATTACHMENT SYSTEM

A. Concealed System: Provide manufacturer's standard stainless steel or zinc, corrosion free concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

2.03 ACCESSORIES AND MISCELLANEOUS ITEMS

A. Miscellaneous Sheet Metal Items: Provide flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, and equipment curbs of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.

B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish, closed-cell synthetic rubber, neoprene, or PVC, or combination steel and closed-cell foam.

C. Sealants:.
   1. Joint Sealants: Dow 795 to match adjoining metal roofing.
   2. Backer Rods: Dow Ethafoam SB. Backer rods shall be placed in joints not less than 75% of its original size.
   3. Seam Tape: Self adhered butyl sealant tape applied to surfaces of dissimilar metals and between metals and concrete masonry and inside seams.

D. Roof Underlayment:
   1. 30 mil thickness, self-adhering, composite membrane of polyethylene sheeting and a layer of rubberized asphalt or butyl rubber compound.
      a. Vycor Ultra by WR Grace
      b. Ice and Water Shield by WR Grace
      c. Other manufacturer's as recommended by the roof panel manufacturer
   2. Ventilation Mat: Apply directly below zinc surfaces.
      a. Enkmat 7010 by Colbond
      b. Delta Trella
      c. Other manufacturer's as recommended by the roof panel manufacturer

E. Solder: Lead-tin soft solder with 40% tin and 60% lead (50/50 also acceptable) per zinc manufacturer recommendations.
   1. Flux: Rheinzink ZD-Pro flux Z-04-S.

2.04 FABRICATION

A. Panels: Fabricate panels and accessory items at factory, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.

B. Double Lock Standing Seam Panel Roofing: Panel fabrication to by by folding brake or acceptable roll forming equipment as approved by panel manufacturer.
   1. Profile: 1 inch double lock standing seam panel profile.
   2. Seam Spacing: 16 inches on center.

C. Panel roofing system shall be designed to be watershedding with watertightness provided by roof underlayment membrane. Sealants shall be used in isolated cases as required by Architect in low-slope applications, roof penetrations, and in conjunction with adjoining construction.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

A. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to assure that the completed roof will be free of leaks.

B. Remove protective film from surface of roof panels immediately prior to installation. Strip film carefully, to avoid damage to prefinished surfaces.

C. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by roof panel manufacturer.

D. Where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

3.03 INSTALLATION

A. Overall: Install roofing system in accordance with approved shop drawings and panel manufacturer's instructions and recommendations, as applicable to specific project conditions. Anchor all components of roofing system securely in place while allowing for thermal and structural movement.
   1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
   2. Minimize field cutting of panels. Where field cutting is absolutely required, use methods that will not distort panel profiles. Use of torches for field cutting is absolutely prohibited.

B. Accessories: Install all components required for a complete roofing assembly, including flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, equipment curbs, rib closures, ridge closures, and similar roof accessory items.

C. Roof Panels: Install panels in strict accordance with manufacturer's instructions, minimizing transverse joints except at junction with penetrations.

D. Zinc 'grain' shall be in the direction of the seams.

3.04 CLEANING

A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

3.05 PROTECTION

A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.

B. Touch-up, repair, or replace damaged roof panels or accessories before date of Substantial Completion.

END OF SECTION

SECTION 10400

IDENTIFICATION DEVICES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Exterior dimensional letters of cut metal construction.

B. All attachments and accessories necessary to provide a complete installation.

1.02 RELATED REQUIREMENTS

A. Section 04200 – Concrete Masonry Units

B. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division I of these Specifications.

1.03 REFERENCE STANDARDS

A. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; International Code Council; 2003.

B. ATBCB ADAAG - Americans with Disabilities Act Accessibility Guidelines; 2002.

1.04 QUALITY ASSURANCE

A. Comprehensive Signage Provider: Client is seeking one, comprehensive signage provider of both interior and exterior signage.

B. Fabricator's Qualifications:

1. Fabricator shall have a minimum of 20 years full time experience producing signage of similar scope and complexity to that indicated.

2. Fabricator shall provide ISO 9001 quality control standards.

C. Installer's Qualifications:

1. Work to be performed only by workers who are completely familiar with the published recommendations of the manufacturer of the material being used.

D. Regulatory Requirements: Products shall meet requirements of the Americans With Disabilities Act Accessibility Guidelines (ADAAG) and local amendments and modifications.

1.05 SUBMITTALS

A. See Section 01300 - Administrative Requirements, for submittal procedures.

B. Product Data: Submit product data for specified products. Include material details for each sign specified.

C. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including dimensions, anchorage, and accessories.

D. Samples: Submit supplier's standard color chart for selection purposes and selected colors for verification purposes.

E. Installation: Submit supplier's installation instructions.

F. Closeout Submittals:

1. Submit Operation and Maintenance Data for installed products, including precautions against harmful cleaning materials and methods.
2. Submit warranty documents specified herein

1.06 DELIVERY, STORAGE, AND HANDLING

A. Package signs as required to prevent damage before installation.

1.07 WARRANTY

A. Manufacturer's Warranty: Submit manufacturer's standard warranty document executed by authorized company official.

1. Project Warranty:

- Sign fabricator shall guarantee work for a period of three (3) years from the date of acceptance covering all static (non-digital) exterior signage provided by the fabricator, agreeing to repair or replace work which has failed as a result of defects in materials, workmanship or installation. Upon notification of such defects, within the warranty period, fabricator will make necessary repairs or replacement at the convenience of Owner's Representative.

2. 5-Year Supplemental Guarantee:

- Five (5) years from product ship date, sign fabricator guarantees to be able to make supplementary deliveries of static (non-digital) exterior signage provided by the fabricator with a similar functionality and design (shape, color, typography and graphics) as delivered under the original order, unless otherwise specifically stated.

PART 2 PRODUCTS

2.01 SIGNAGE SYSTEMS

A. Acceptable Manufacturers:

1. ASI Signage Innovations
   - Design is based on use of standard products manufactured by ASI Signage Innovations, 3860 W. Northwest Highway, Suite 350, Dallas, Texas 75220, and trade names of that manufacturer are used herein. (www.asisignage.com)
2. Substitutions: See Section 01600 - Product Requirements.

B. Dimensional Cut Metal Letters – Building Address

1. Acceptable Product: Series LPS Cut Metal Dimensional Letters
   - Material: Zinc, color and finish to match roof panels
   - Fabricated Letters:
     1. Letterstyle: Century Gothic
     2. Text and Letter Cap Height:
        - Two sets, 8" high: "105"
     3. Letter Depth: 1"
   - Mounting Method: Projected Stud Mount
   - See Drawings for location of signage.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are ready to receive work.

B. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

A. Install the work of this Section in strict accordance with the manufacturers' recommendations as approved by the Owner, using only the approved mounting materials, and locating all components firmly into position and plumb.

B. Install in accordance with manufacturer's instructions.

C. Install neatly, with horizontal edges level.
D. Locate signs where indicated
E. Protect from damage until Substantial Completion; repair or replace damage items.

3.03 CLEANING, PROTECTION AND REPAIR

A. Repair scratches and other damage which might have occurred during installation. Replace components where repairs were made but are still visible to the unaided eye from a distance of 10 feet.
B. Remove temporary coverings and protection to adjacent work areas. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance.
C. Remove construction debris from project in accordance with provisions in Division 1.

END OF SECTION

SECTION 10 44 00

FIRE EXTINGUISHERS, CABINETS AND ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fire extinguishers.

B. Fire extinguisher cabinets.

1.02 REFERENCE STANDARDS

A. NFPA 10 - Standard for Portable Fire Extinguishers; National Fire Protection Association; 2007.

B. UL (FPED) - Fire Protection Equipment Directory; Underwriters Laboratories Inc.; current edition.

1.03 SUBMITTALS

A. See Section 01300 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate cabinet physical dimensions.

C. Product Data: Provide extinguisher operational features.

D. Manufacturer's Installation Instructions: Indicate special criteria and wall opening coordination requirements.

E. Maintenance Data: Include test, refill or recharge schedules and re-certification requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Fire Extinguishers, Cabinets and Accessories:
   1. Larsen's Manufacturing Co: www.larsensmfg.com.
   2. Substitutions: See Section 01600 - Product Requirements.

2.02 FIRE EXTINGUISHERS

A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
   1. Provide extinguishers labeled by Underwriters Laboratories Inc. for the purpose specified and indicated.

2.03 FIRE EXTINGUISHER CABINETS

A. Provide fire extinguisher cabinets to match number of extinguisher specified.
   1. Surface mounted Fire Extinguisher Hanger with Satin Finish provided with fire extinguisher

B. All fire extinguisher cabinets shall have a factory Satin Finish. All cabinets to be from the same manufacturer.

C. Door Style: Vertical DUO with Larsen LOC

D. Door Glazing: Clear Acrylic

E. Door Trim & Material: Aluminum (AL)

F. Die Cut Lettering Style & Color: Vertical, Black

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Secure rigidly in place.

C. Place extinguishers and accessories in cabinets.

3.03 SERVICE

A. Determine the approximate completion date of the work and then inspect, charge and tag the fire extinguishers at a date not more than ten (10) days before nor less than one (1) day before Substantial Completion.

END OF SECTION

SECTION 32 31 13

CHAIN LINK FENCE

PART 1 - GENERAL

1.1 WORK OF THIS SECTION

The work of this Section includes providing chain link fencing with HDPE privacy slats and appurtenances.

1.2 STANDARD SPECIFICATIONS

Except as otherwise indicated in this Section of the Specifications, the Contractor shall comply with the Standard Specifications for Public Works Construction, 2009 Edition.

1.3 SPECIFICATIONS AND STANDARDS

Except as otherwise indicted, the current editions of the following apply to the work of this Section.

A. ASTM A 90 Test Method for Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles

B. ASTM A 392 Specifications for Zinc-Coated Steel Chain Link Fence Fabric

1.4 FACTORY TESTING

Wire fabric shall be factory tested for weight of zinc coating in accordance with method specific in ASTM A 90.

PART 2 – PRODUCT

2.1 GENERAL

Material for chain link fencing, gates and appurtenances shall conform to the requirements of SSPWC, Subsection 206-6 and as indicated herein.

2.2 POSTS AND RAILS

Materials for posts, rail and braces shall be Class 1 complying with SSPWC Subsection 206-6.2.

2.3 WIRE FABRIC

Chain link fabric shall be zinc-coated fabric conforming to Subsection 206-6.3.1 of SSPWC.

2.4 FOOTINGS

Concrete for post footings shall conform to Subsection 201-1 of SSPWC, Class 560-C-3250 concrete.

2.5 PRIVACY SLATS

Privacy slats shall be winged type, self-locking, made from high density polyethylene. Slats shall be installed vertically and shall be forest green in color

PART 3 – EXECUTION

3.1 INSTALLATION OF FENCING

A. All earth, brush or other obstructions which interfere with the proper alignment of construction of fences shall be removed.

B. Line posts shall be spaced at not more than 10-foot intervals measured from center-to-center of the post and generally parallel to the ground slope. Posts shall be set plumb and shall be centered in concrete foundation.

C. Gate post shall be provided with concrete foundation.

D. Changes in the fence lines, where the horizontal angle is 15 degrees or more, shall be considered as corners, and corner posts shall be installed.

E. Corner, end and gate posts shall be braced to the nearest line post. Corner and end posts shall be diagonally braced. Bracing of gate posts shall be horizontal braces with truss rods. Line posts shall be braced horizontally and trusses in both directions with truss rods at 1,000 feet maximum intervals.

F. Chain link fabric shall be taut and shall be attached to posts, stretcher bars, and wires with galvanized fabric bands or tie wires at a maximum spacing of 12 inches on posts and 18 inches on the rails and tension wires. The tension wires shall be stretched tight with turnbuckles at the end and corner posts. The bottom tension wire shall be installed on a straight grade between posts.

G. The fabric shall be fastened to the end, corner, and gate posts with stretcher bars and stretcher bar bands spaced at approximately 12 inches.

H. Install privacy slats vertically, in accordance with the manufacturers instructions.

END OF SECTION

SECTION 33 39 15

PRECAST CONCRETE VAULT

PART 1 - GENERAL

1.1 DESCRIPTION

A. The Contractor shall provide a 6' x 10' precast concrete vault with a full opening access hatch, as shown on the drawings and as specified herein.

B. All precast structures shall be manufactured in a plant especially designed for that purpose. All units shall conform to the design shown on the Drawings, and all work shall be done under strict controlled supervision.

C. Units shall conform to the specific size requirements shown on the Drawings.

D. All exterior sections of the precast vault shall be coated with 60 mils of a 2-part epoxy coating system.

1.2 REFERENCE STANDARDS

A.	H-20"AASHTO"	Standard Specifications for Highway Bridges with revisions.
B.	SS-S-00210	Federal Specification (GSA - FSS) for cold applied preformed sealing compound.
C.	ASTM C33	Standard Specification for Concrete Aggregate
D.	ASTM C150	Standard Specification for Portland Cement
E.	ASTM C330	Standard Specification for Lightweight Aggregates for Structural Concrete
F.	ASTM A615	Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
G.	ASTM A82	Standard Specification for Cold-Drawn Steel Wire for Concrete Reinforcement.
H.	ASTM A185	Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete

1.3. PRECAST WET WELL SUPPLIER

The project design is predicated upon precast concrete vault products manufactured by Olson Precast Company, Fontana, California; Telephone: (909) 427-1138. Alternate suppliers of the precast concrete vault must be preapproved by the City of El Segundo

Building Department prior to bid. Alternate suppliers will not be allowed after award of the project to the General Contractor.

1.4. SUBMITTALS

The following shall be submitted in compliance with SSPWC 2-5.3.

A. Contractor shall submit for review and approval detailed calculations and drawings of vault components and foundations, sealed by a Registered Professional Structural Engineer in the State of California. Calculations shall be prepared using information from the Project Soils Report. A copy of this report is available through the City of El Segundo Public Works Department.

Calculations will be submitted to the City of El Segundo Building Department for review and approval (including products manufactured by Olson Precast Company).

PART 2 - PRODUCTS

2.1 DESIGN LOADS

Design loads shall consist of dead load, live load, impact, and in addition, loads due to water table, lifeguard building, retaining wall, and any other loads which may be imposed on the structure.

Live loads shall be H-20 per AASHTO. Design wheel load shall be 16 kips plus impact. The live load shall be that loading which produces the maximum shears and bending moments in the structure.

2.2 FORMS

All forms used in placing concrete shall be of metal and sufficiently designed and braced to maintain their alignment under pressures of the concrete during placing.

2.3 CONCRETE

A. Aggregates: All aggregates fine and coarse, other than lightweight aggregate shall conform to specifications out-lined by ASTM C33. Lightweight aggregates fine and coarse shall conform to the specifications outlined by ASTM C330. Aggregates shall be free of deleterious substances causing reactivity with oxidized hydrogen sulfide. Both types of aggregate shall be graded in a manner so as to produce a homogeneous concrete mix. All materials are to be accurately weighed at a central batching facility for mixing.

B. Cement: All cement shall be Portland Cement conforming to ASTM C 150, Type V. Low alkali cement.

C. Placing: All concrete shall be handled from the mixer or transport vehicle to the place of final deposit in a continuous manner, as rapidly as practicable, and without segregation or loss of ingredients, until the approved unit operation is completed.

Concrete shall be placed in layers not over two (2) feet deep. Each layer shall be compacted by mechanical internal or external-vibrating equipment. Duration of the vibration cycle shall be limited to the time necessary to produce satisfactory consolidation without causing objectionable segregation.

D. Curing: For purposes of early re-use of forms, the concrete may be steam cured after an initial set has taken place. The steam temperature shall not exceed 160 degrees, and the temperature shall be raised from normal ambient temperatures at a rate not to exceed 40 degrees per hour.

The steam cured unit shall not be removed from the forms until sufficient strength is obtained for the unit to withstand any structural strain that the unit may be subjected during the form stripping operation. After the stripping of forms further curing by means of water spray or a Membrane Curing Compound may be used, and shall be of clear or white type, conforming to ASTM C 309-58.

2.4 REINFORCING STEEL

All reinforcing steel, including welded wire mesh, shall be of the size and in the location as shown on the Plans. All reinforcing shall be sufficiently tied to withstand any displacement during the pouring operation. All bars shall be grade 60 conforming to ASTM A 615.

2.5 ACCESS HATCHES

The valve vault access hatch shall be H-20 traffic rated, 6'W x 10'L, 4-door, aluminum and spring assisted with removable aluminum I-beam supports as required. Hardware shall be 316 stainless steel and shall include, but not be limited to hinges, hold-open arms, springs, and spring covers. Hatches shall be equipped with extruded aluminum channel trough frames with 1½-inch drain coupling, flush aluminum drop handles, which do not protrude above the cover, a recessed padlock box and stainless steel staple sized for a No. 6 padlock, and shall be as manufactured by BILCO, U.S. Foundry, INRYCO, or approved equal. Hatch shall incorporate a fiberglass fall protection grating system with stainless steel hardware and rated for 300 PSF. This system shall be easily operated by one person and shall comply with CAL OSHA 1910.23.

The Contractor shall submit detailed calculations and drawings, sealed by a registered professional engineer in the State of California for review and approval by the City of El Segundo Building Department.

2.6 JOINT SEALING COMPOUN

The joint sealing compound shall be permanently adhesive flexible plastic material complying in every detail to Federal Specification SS-S-00210 (GSA-FSS). Joint sealing compound shall be Quickseal by Associated Concrete Products, or approved equal. Exterior manhole joints shall be wrapped with cold applied plastic film. Joint wrap shall be "Rub'R-NEK as manufactured by K-T Snyder Company or equal.

2.7 EXTERIOR COATING

All exterior surfaces of the vault shall be coated with 60 mils DFT of carbolime plasite 4-500-S or equal.

2.8 MORTAR

Mortar for filling interior joints shall consist of 1-part cement to 2½-parts of sand by volume.

PART 3 - EXECUTION

3.1 FIELD PREPARATION

The Contractor shall prepare a hole large enough to accommodate the outside dimension of the structure as shown on the Drawings. Prior to setting, the Contractor shall provide base material as shown on the Contract Drawings to receive the unit. The base material shall be compacted and graded level and at proper elevation to receive the structure in relation to the conduit grade or ground cover requirements as designated in the Plans.

3.2 INSTALLATION

Precast concrete structures shall be installed in strict conformance with the manufacturer's written instructions.

After installation, wrap all exterior joints with polyethylene film (RUB-R-NEK). Place mortar in all interior joints and trowel to a smooth finish.

3.3 INSPECTION

Upon request, the Contractor shall provide the Engineer / Inspector a workman with ladder or other safe and adequate means for inspection access.

END OF SECTION

APPENDIX

California Regional Water Quality Control Board

Los Angeles Region

Recipient of the 2001 *Environmental Leadership Award* from Keep California Beautiful

Linda S. Adams
Secretary for Environmental Protection

320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: http://www.waterboards.ca.gov/losangeles

Arnold Schwarzenegger
Governor

ORDER NO. R4-2008-0032

WASTE DISCHARGE REQUIREMENTS
FOR
DISCHARGES OF GROUNDWATER FROM CONSTRUCTION AND PROJECT DEWATERING
TO SURFACE WATERS
IN
COASTAL WATERSHEDS OF LOS ANGELES AND VENTURA COUNTIES

(GENERAL NPDES PERMIT NO. CAG994004)

This Order was adopted by the Regional Water Quality Control Board on:	**June 5, 2008**
This Order shall become effective on:	**July 5, 2008**
This Order shall expire on:	**June 5, 2013**
The Discharger shall file a Report of Waste Discharge (Notice of Intent) in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**60 days from the date of notification of adoption of this Order**
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a minor discharge.	

IT IS HEREBY ORDERED, that Order No. R4-2003-0111 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Tracy J. Egoscue, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on June 5, 2008.

Tracy J. Egoscue, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

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I. FACILITY/DISCHARGE INFORMATION

1. This Order (hereafter, General Permit) is intended to authorize discharges of treated or untreated groundwater generated from permanent, temporary dewatering operations or other applicable wastewater discharges not specifically covered in other general NPDES permit. Discharges from facilities to waters of the United States that do not cause, have the reasonable potential to cause, or contribute to an in-stream excursion above any applicable state or federal Water quality objectives/criteria or cause acute or chronic toxicity in the receiving water are authorized discharge in accordance with the conditions set forth in this Order.

II. NOTIFICATION REQUIREMENTS

A. Eligibility Criteria

1. This order covers discharges to surface waters of treated or untreated groundwater from dewatering operations and other wastewaters.

2. To be covered under this Order, a discharger must:

   a. Demonstrate that pollutant concentrations in the discharge shall not cause violation of any applicable water quality objective for the receiving waters, including discharge prohibitions;

   b. Demonstrate that discharge shall not exceed the water quality criteria for toxic pollutants (Attachment B and Part V of this Order), and there shall be no reasonable potential to cause or contribute to an excursion above the criteria.

   c. Perform reasonable potential analysis using a representative sample of groundwater or wastewater to be discharged. The sample shall be analyzed and the data compared to the water quality screening criteria for the constituents listed on Attachment A to determine the most appropriate permit. If the analytical test results exceeds the water quality screening criteria listed on Attachment A, then a reasonable potential for discharge of toxics shall be considered to exist.

      i. If the analytical test results of the discharge show that only petroleum products or only volatile organic compounds (VOCs) exceed the water quality screening criteria listed on Attachment A, then the discharger may not be enrolled under this Order, but will be enrolled under Regional Board Order Nos. R4-2007-0021 or R4-2007-0022, as appropriate.

      ii. If the analytical test results of the discharge show that petroleum products, VOCs and other toxics exceed the water quality screening criteria listed on Attachment A, then the discharger will be enrolled under this permit and treatment of the groundwater will be required for discharge.

      iii. If the analytical test results of the discharge show that toxics are below the screening levels in Attachment A, then the discharger will be enrolled under this permit and treatment of the groundwater for toxics will not be required for discharge.

   d. The discharge shall not cause acute nor chronic toxicity in receiving waters;

e. If necessary, the discharge shall pass through a treatment system designed and operated to reduce the concentration of contaminants to meet the effluent limitations of this Order; and

f. The discharger shall be able to comply with the terms or provisions of this General Permit.

3. New discharges and existing discharges regulated under existing general or individual permits, which meet the eligibility criteria, may be regulated under this Order.

4. For the purpose of renewal of existing individual NPDES permits with this General Permit, provided that all the conditions of this General Permit are met, renewal is effective upon issuance of a notification by the Executive Officer and issuance of a new monitoring program.

5. When an individual NPDES permit with more specific requirements is issued to a discharger, the applicability of this Order to that discharger is automatically terminated on the effective date of the individual permit.

B. Ineligibility

The discharge of wastewater contaminated with toxic pollutants with no effluent limitations in this permit are not eligible for enrollment under this General Permit.

C. Authorization

To be authorized to discharge under this Order, the discharger must submit a Notice of Intent (NOI) in accordance with the requirements of Part D of this Order. Upon receipt of the application, the Executive Officer shall determine the applicability of this Order to such a discharge. If the discharge is eligible, the Executive Officer shall notify the discharger that the discharge is authorized under the terms and conditions of this Order and prescribe an appropriate monitoring and reporting program. For new discharges, the discharge shall not commence until receipt of the Executive Officer's written determination of eligibility for coverage under this general permit or until an individual NPDES permit is issued by the Regional Board.

D. Notice of Intent

1. Deadline for Submission

a. Renewal of permits of existing dischargers covered under individual permits that meet the eligibility criteria and have submitted a NOI will consist of a letter of determination from the Executive Officer of coverage under this Order.

b. Existing dischargers covered under Order No. R4-2003-0111 will be sent a NOI form that must be completed and returned to the Regional Board within 60 days of receipt; otherwise permit coverage may be revoked. Existing dischargers enrolling under this Order are required to collect a representative groundwater/wastewater sample and analyze it for all the constituents listed on Attachment A. Dischargers shall conduct this

analysis and submit the result with a NOI, otherwise the existing authorization may be terminated. If the analytical sample result of any constituent other than those listed in Item V. of this Order exceeds the water quality screening criteria listed on Attachment A, the discharge will be considered ineligible for enrollment under this permit. However, the discharge will be enrolled under other appropriate general permit, and then, the existing coverage under this general permit will be terminated. Existing discharges that has been enrolled under the existing permit within the last one year can re-submit the analytical data used for their initial enrollment with their NOI.

c. New dischargers shall file a complete application at least 45 days before commencement of the discharge.

2. Forms for Report of Waste Discharge

a. Dischargers shall use the NOI Form or appropriate USEPA Forms.

b. The discharger, upon request, shall submit any additional information that the Executive Officer deems necessary to determine whether the discharge meets the criteria for coverage under this Order, to prescribe an appropriate monitoring and reporting program, or both.

c. The discharger must obtain and analyze (using appropriate methods) a representative sample of the groundwater to be treated and discharged under this Order. The analytical method used shall be capable of achieving a detection limit at or below the minimum level, otherwise, a written explanation shall be provided. The analytical result shall be submitted with the NPDES application. The data shall be tabulated and shall include the results for every constituent listed on Attachment A.

d. The following should be included with the NOI Form:

i. The feasibility study on reuse and/or alternative disposal methods of the wastedwater;

ii. Description of the treatment system;

iii. The type of chemicals that will be used (if any) during the operation and maintenance of the treatment system;

iv. Flow diagram of the influent to the discharge point; and

v. Preventive maintenance procedures and schedule for the treatment system.

vi. **Creekside construction dewatering operations.** Creekside construction dewatering operations for the purposes of this permit are defined as the dewatering of groundwater (1) where the dewatering is necessary during construction operations and (2) where the groundwater has a direct hydrologic connection with, and

similar mineral chemistry for TDS, chloride and sulfate to, the surface waterbody to which it will be discharged. For creekside construction dewatering operations, the following additional information shall be submitted with the ROWD.

i. Best Management Practices (BMPs) for preventing degradation of water quality or impairment of receiving water beneficial uses,

ii. Demonstration of direct hydrologic connection and similar water chemistry between the groundwater and the surface water body must be substantiated with hydrogeological and analytical data, and certified by registered hydrogeologist. Water isotope tracing and other geophysical techniques may be used to demonstrate hydrologic connectivity. In addition, when feasible evidence of the physical connection between the groundwater and the surface water body could be demonstrated by stream depletion or drawdown by test well dewatering operation,

iii. The treatment system to be used for removing toxic compounds from the wastewater (if applicable),

iv. A demonstration that the discharger has considered sewering, re-use, or other discharge options and that it is infeasible to discharge to the sanitary sewer system, to re-use the dewatered groundwater/wastewater, or to otherwise lawfully discharge the dewatered groundwater/wastewater.

e. Title 23 of the California Code of Regulations (CCR), Division 3, Chapter 9, Article (1)(A), section 2200, *Annual Fee Schedule*, requires that all discharges subject to a specific general permit shall pay the same annual fee.

1. Notice of Termination

Dischargers shall submit a Notice of Termination or Transfer (NOTT) when coverage under this General Permit is no longer needed. An NOTT contains the Waste Discharge Identification Number (WDID), the name and address of the owner of the facility, and is signed and dated by the owner certifying that the Dischargers associated with Permit No. CAG994004 have been eliminated or that there has been a change in ownership. Upon submission, the Discharger is no longer authorized to discharge wastewater associated with this General Permit.

2. Change of Ownership

Coverage under this Order may be transferred in case of change of ownership of land or discharge facility provided the existing discharger notifies the Executive Officer at least 30 days before the proposed transfer date, and the notice includes a written agreement between the existing and new dischargers containing a specific

date of transfer of coverage, responsibility for compliance with this Order, and liability between them.

III. FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (hereinafter Regional Water Board), finds:

A. Background

1. On August 7, 2003, the Regional Board adopted Order No. R4-2003-0111 General NPDES Permit No. CAG994004-Waste Discharge Requirements for Discharges from construction and project dewatering to surface waters. This General Permit expires on August 7, 2008. Approximately 281 dischargers are enrolled under this General Permit. This Order now renews the requirements of this General Permit.

2. On September 22, 1989, the United States Environmental Protection Agency (USEPA) granted the State of California, through the State Water Resources Control Board (State Board) and the Regional Boards, the authority to issue general National Pollutant Discharge Elimination System (NPDES) permits pursuant to 40 Code of Federal Regulations (40 CFR) parts 122 and 123.

3. 40 CFR section 122.28 provides for issuance of general permits to regulate a category of point sources if the sources:

   a. Involve the same or substantially similar types of operations;
   b. Discharge the same type of waste;
   c. Require the same type of effluent limitations or operating conditions;
   d. Require similar monitoring; and
   e. Are more appropriately regulated under a general permit rather than individual permits.

4. General waste discharge requirements and NPDES permits enable Regional Board staff to expedite the processing of requirements, simplify the application process for dischargers, better utilize limited staff resources, and avoid the expense and time involved in repetitive public noticing, hearings, and permit adoptions.

B. Facility and Discharge Description

1. Discharges covered under this permit include treated or untreated groundwater generated from permanent or temporary dewatering operations or other appropriate wastewater discharge not specifically covered in other general NPDES permit. In addition, this permit covers discharge from cleanup of contaminated sites where other project specific General Permits may not be appropriate, such as groundwater impacted by metals and/or other toxic compounds. This permit also covers discharges from dewatering operations in the vicinity of creeks where surface waters and groundwaters are hydrologically connected and have similar water chemistry. Creekside discharges which qualify under this permit will not be required to comply with the waterbody specific limitations for total dissolved solids (TDS), sulfate or chloride. The purpose of this approach to regulating creekside

discharges is to avoid requiring a discharger to treat a surface waterbody to lower than naturally occurring, background, mineral content. In such circumstance, cycling the extracted creekside water back into the waterbody would not cause any decrease in the quality of the waterbody or degradation.

2. Wastewater discharge from permanent or temporary dewatering activities include, but are not limited to the following:

   a. Treated or untreated wastewater from permanent or temporary construction dewatering operations
   b. Groundwater pumped as a aid in the containment and/or cleanup of contaminant plume
   c. Groundwater extracted during short-term and long-term pumping/aquifer tests
   d. Groundwater generated from well drilling, construction or development and purging of wells
   e. Equipment decontamination water
   f. Subterranean seepage dewatering
   g. Incidental collected stormwater from basements

3. Other wastewater discharges covered by this permit include process and non-process wastewater that meet the eligibility criteria and could not be covered under other specific general NPDES permit.

4. To enroll under this general permit, a discharger must certify that there is no reasonable potential for pollutants other than those regulated by this permit to be in the discharge. Existing and new dischargers enrolling under this permit are required to collect a representative groundwater or wastewater sample and analyze it for all the constituents listed on Attachment A. Existing dischargers shall conduct this analysis and submit the result with a Notice of Intent Form, otherwise the existing authorization will be terminated.

5. Pursuant to section 2, Article X, California Constitution, and section 275 of the California Water Code on preventing waste and unreasonable use of waters of the state, this Regional Board encourages, wherever practical, water conservation and/or re-use of wastewater. To obtain coverage under this Order, the discharger shall first investigate the feasibility of conservation, land disposal and/or reuse of the wastewater.

6. This Regional Board adopted *Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the County of Los Angeles* contained in Order No. 01-182 [NPDES No. CAS614001] and *Waste Discharge Requirements for Municipal Stormwater and Urban Runoff Discharges within Ventura County Flood Control District, County of Ventura, and the Cities of Ventura County* contained in Order No. 00-108 [NPDES No. CAS004002] on July 15, 1996, and July 27, 2000, respectively. These Orders prohibit non-stormwater discharges to storm drain systems unless they are covered by separate NPDES permits. This prohibition, in general, does not apply to rising groundwater, uncontaminated groundwater infiltration discharges, discharges from potable water distribution

system releases[1], foundation and footing drains discharges, and water from crawl space pumps. The municipality may allow discharge of these types of discharges into the storm drain system. However, the municipality or the Regional Board may prohibit these discharges if they are determined to cause, or threaten to cause, degradation of water quality, violation of water quality objectives, cause nuisance and/or impair beneficial uses of receiving waters.

C. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

D. Background and Rationale for Requirements

The Regional Water Board developed the requirements of this Order based on information submitted as part of the applications for several like facilities, through monitoring and reporting programs, and through special studies and the following information.

1. The effluent limitations for discharges covered under this permit are calculated assuming no dilution. For most practical purposes, discharges from facilities covered under this permit do not flow directly into receiving water with significant flow volume to consider dilution credit or to allocate a mixing zone. Most discharges flows to storm drain systems that discharge to creeks and streams. Many of these creeks and streams are dry during the summer months. Therefore, for many months of the year, these discharges may represent all or nearly all of the flow in some portions of the receiving creeks or streams. These discharges therefore have the potential to recharge groundwaters protected as drinking waters.

   An exception to this policy may be applied based on approved mixing zone study and based on demonstration of compliance with water quality objectives in the receiving water as prescribed in the Basin Plan. This exception process is more appropriate for an individual permit, and would not be appropriate for a general permit, that should be protective of most stringent water quality objectives and beneficial uses. If discharger requests that a dilution credit be included in the computation of effluent limit or that a mixing zone be allowed, an individual permit will be required. However, if no mixing zone is proposed, this general permit provides coverage for all discharges to receiving water bodies in Coastal Watersheds of Los Angeles and Ventura Counties.

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[1] "Potable Water Distribution Systems Releases" means sources of flows from drinking water storage, supply and distribution systems including flows from system failures, pressure releases, system maintenance, distribution line testing, fire hydrant flow testing; and flushing and dewatering of pipes, reservoirs, vaults, and minor non-invasive well maintenance activities not involving chemical addition(s). It does not include wastewater discharges from activities that occur at wellheads, such as well construction, well development (i.e., aquifer pumping tests, well purging, etc.), or major well maintenance.

2. This order regulates the discharge of groundwater that may or may not be impacted by toxic compounds and/or conventional pollutants.

   Various biological, chemical, physical, thermal treatment systems could be employed to remove these toxic or conventional pollutants in groundwater to applicable permit limits. For example, air stripping, carbon absorption, chemical oxidation treatment systems could be used to remove volatile organic compounds in groundwater. Reverse osmosis, ion exchange, or pH adjustment could be used as treatment technologies to remove conventional pollutants and metals. Biological systems could be used to degrade or remove semi-volatile organic compounds. This permit does not provide specific treatment technologies for the universe of toxic compounds that could be found in groundwater. When treatment is required prior to discharge, dischargers will be required to submit schematics of treatment flow diagrams with descriptions of the treatment system including statements on the effectiveness of the system to achieve the applicable permit limits during the permit process.

3. This permit includes effluent limitations for metals in discharges from dewatering or other operations to both freshwater and saltwater. For purposes of this permit, saltwater is defined as waterbodies with saline, estuarine or marine beneficial use designations. Additional clarification for applying saltwater objectives is contained in the CTR. All other inland surface waters are considered freshwater. The toxicity of certain metals in freshwater including cadmium, chromium III, copper, lead, nickel, silver, and zinc is dependent on water hardness. The CTR expresses the objectives for these metals through equations where the hardness of the receiving water is a variable. To simplify the permitting process, it is necessary that fixed hardness values be used in these equations. This order requires the discharger to propose appropriate receiving water hardness or effluent hardness based on analytical results of receiving water or effluent samples. Upon approval of the Executive Officer, this hardness value will be used to determine the appropriate metal limitation from the appropriate table of limits (E. 2. b. i.) in the Order.

4. Total Maximum Daily Load (TMDLs) for metals, nutrients and other toxic pollutants have been developed for various watersheds in Los Angeles and Ventura County Watersheds. Where ever applicable, Section V.B. of this Order prescribes appropriate TMDL for these pollutants. Generally where wet weather and dry weather TMDLs are specified this permit applies only dry weather TMDL to streamline the permitting process. However, where wet weather TMDL is specified and no dry weather TMDL is specified, then wet weather TMDL is specified in this permit. Receiving water with specified TMDL include Los Angeles River and tributaries (copper, cadmium, lead, zinc and silver), Ballona Creek and tributaries (copper, lead, zinc, and silver), San Gabriel River and tributaries (copper, lead, zinc, and silver), Calleguas Creek and tributaries and Mugu Lagoon (copper, nickel, lead, zinc, silver and pesticides). TMDL limitations will not be prescribed for discharges that show no reasonable potential for these constituents to be in the effluent above the applicable screening criteria. If Discharge can not meet these effluent limitations immediately, Discharger can apply for individual permit and seek a Time Schedule Order with interim limits for the pollutants of concern.

6. Because this Order is intended to serve as a general NPDES permit and covers discharges to all surface waters in the Los Angeles Region, the effluent limitations establish pursuant to this general order are established to protect the most protective water quality objective for the surface water beneficial uses in the Los Angeles Region.

E. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

F. Technology-Based Effluent Limitations

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations[2], require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3 of CWA.

G. Water Quality-Based Effluent Limitations

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi). The WQBELs are based on the Basin Plan, other State plans and policies, or USEPA water quality criteria which are taken from the California Toxics Rule (CTR). These requirements, as they are met, will protect and maintain existing beneficial uses of the receiving water. The attached fact sheet for this Order includes specific bases for the effluent limitations.

H. Water Quality Control Plans.

The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies

[2] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

1. Basin Plan. The Basin Plan contains water quality objectives for, and lists the beneficial uses of, specific water bodies (receiving waters) in the Los Angeles Region. Typical beneficial uses covered by this Order include the following:

   a. Inland surface waters above an estuary - municipal and domestic supply, industrial service and process supply, agricultural supply, groundwater recharge, freshwater replenishment, aquaculture, warm and cold freshwater habitats, inland saline water and wildlife habitats, water contact and noncontact recreation, fish migration, and fish spawning, preservation of rare and endangered species, preservation of biological habitats, and shellfish harvesting.

   b. Inland surface waters within and below an estuary - industrial service supply, marine and wetland habitats, estuarine and wildlife habitats, water contact and noncontact recreation, commercial and sport fishing, aquaculture, migration of aquatic organisms, fish migration, fish spawning, preservation of rare and endangered species, preservation of biological habitats, and shellfish harvesting.

   c. Coastal Zones (both nearshore and offshore) - industrial service supply, navigation, water contact and noncontact recreation, commercial and sport fishing, marine habitat, wildlife habitat, fish migration and spawning, shellfish harvesting, and rare, threatened, or endangered species habitat.

Requirements of this Order implement the Basin Plan.

Total Maximum Daily Loads: Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. Los Angeles Region has been developing TMDLs for metals, nutrients and other toxic compounds. This Order implements approved and relevant TMDLs. Attachment B prescribes the limits for the pollutants that are waterbody specific. Detailed discussion on TMDLs is provided in the Attachment F.

2. The State Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975.

3. The State Board adopted a *Water Quality Control Policy for the Enclosed Bays and Estuaries of California* in May 1974 (Policy). The Policy contains narrative and numerical water quality objectives that are designed to prevent water quality degradation and protect beneficial uses in enclosed bays and estuaries.

The Policy also lists principles of management that include the State Board's goal to phase out all discharges (excluding cooling waters), particularly industrial process water,

to enclosed bays and estuaries as soon as practicable. The waste described above is not considered an industrial process wastewater.

I. National Toxics Rule (NTR) and California Toxics Rule (CTR)

USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

J. State Implementation Policy

On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

K. Compliance Schedules and Interim Requirements (Not Applicable)

L. Alaska Rule.

On March 30, 2000, USEPA revised its regulation that specifies when new and revised State and Tribal water quality standards become effective for CWA purposes (40 CFR §131.21, 65 FR 24641, April 27, 2000). Under USEPA's new regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

M. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants that are no more stringent than required by CWA. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards.

N. Antidegradation Policy

Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F), the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution No. 68-16.

O. Anti-Backsliding Requirements

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR §122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

P. Endangered Species Act.

This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

Q. Monitoring and Reporting

Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (hereinafter MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

R. Standard and Special Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

S. Provisions and Requirements Implementing State Law (Not Applicable)

T. Notification of Interested Parties.

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.

U. Consideration of Public Comment.

The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F) of this Order.

IV. DISCHARGE PROHIBITIONS

A. The discharge of wastes other than those which meet eligibility requirements of this Order is prohibited unless the discharger obtains coverage under another general permit or an individual permit that regulates the discharge of such wastes.

B. Bypass or overflow of untreated or partially treated contaminated groundwater to waters of the State either at the treatment system or from any of the collection or transport systems or pump stations tributary to the treatment system is prohibited.

C. The discharge shall not cause, have a reasonable potential to cause, or contribute to an in-stream excursion above any applicable criterion promulgated by USEPA pursuant to section 303 of the CWA, or water quality objective adopted by the State or Regional Board.

D. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

E. The purposeful or knowing discharge of ploychlorinated biphenols (PCBs) is prohibited.

V. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

1. Discharge of an effluent from the outfall location(s) listed in the enrollment authorization factsheet in excess of the following limitations is prohibited. (In the authorization letter, when a discharger is enrolled under this permit, the Executive Officer shall list in the factsheet each constituent(s) from the appropriate limitations table(s) below that is applicable to the specific discharge).

a. Limits applicable to discharges to freshwater or saltwater bodies

i. Table 1-General Constituents

Constituents	Units	Discharge Limitations	
		Daily Maximum	Monthly Average
Total Suspended Solids	mg/L	150	50
Turbidity	NTU	150	50
BOD_5 20°C	mg/L	30	20
Oil and Grease	mg/L	15	10
Settleable Solids	ml/L	0.3	0.1
Sulfides	mg/L	1.0	
Phenols	mg/L	1.0	
Residual Chlorine	mg/L	0.1	
Methylene Blue Active Substances (MBAS)	mg/L	0.5	

ii. Table 2-Organic compounds

Constituent	Units	Discharge Limitations			
		Other Waters		MUN[3]	
		Daily Max	Monthly Avg.	Daily Max	Monthly Avg.
Volatile Organic Compounds					
1,1,2,2-tetrachloroethane	µg/L	1		0.34	0.17[4]
1,1,2-trichloroethane	µg/L	5		1.2	0.6
1,1,1-trichloroethane	µg/L	200		200	
1,1-dichloroethane	µg/L	5		5	
1,1-dichloroethylene	µg/L	6	3.2	0.11	0.057[4]
1,2-dichloroethane	µg/L	0.50		0.50	0.38[4]
1,2-dichloropropane	µg/L	5		1.1	0.52[4]
1,2-trans-dichloroethylene	µg/L	10		10	
1,3-dichloropropylene	µg/L	0.5		0.5	
Acrolein	µg/L	100		100	
Acrylonitrile	µg/L	1.7	0.66	0.12	0.059[4]
Acetone	µg/L	700		700	
Benzene	µg/L	1.0		1.0	
Bromoform	µg/L	720	360	8.6	4.3
Carbon tetrachloride	µg/L	0.5		0.5	0.25
Chlorobenzene	µg/L	30		30	
Chlorodibromomethane	µg/L	68	34	0.81	0.40[4]

[3] MUN refers to discharges to those waterbodies designated MUN (Municipal and Domestic Supply) identified in the Basin Plan with an "E" or and "I" designation.

[4] If the reported detection level is greater than the effluent limit for this constituent, then a non-detect using ML detection is deemed to be in compliance.

Constituent	Units	Discharge Limitations			
		Other Waters		MUN[3]	
		Daily Max	Monthly Avg.	Daily Max	Monthly Avg.
Dichlorobromomethane	µg/L	92	46	1.1	0.56
Chloroethane	µg/L	100		100	
Chloroform	µg/L	100		100	
Methyl ethyl ketone	µg/L	700		700	
Ethylbenzene	µg/L	700		700	
Ethylene dibromide	µg/L	0.05		0.05	
Methyl tertiary butyl ether (MTBE)	µg/L	5		5	
Methylbromide	µg/L	10		10	
Methylchloride	µg/L	3		3	
Methylene chloride	µg/L	3,200	1,600	9.5	4.7
Tetrachloroethylene	µg/L	5.0		1.6	0.8
Toluene	µg/L	150		150	
Trichloroethylene	µg/L	5.0		5.0	2.7
Vinyl chloride	µg/L	0.5		0.5	
Xylenes	µg/L	1750		1750	
Pesticides and PCBs					
4,4'-DDD	µg/L	0.0017	0.00084	0.0017	0.00083[4]
4,4'-DDE	µg/L	0.0012	0.00059	0.0012	0.00059[4]
Aldrin	µg/L	0.00028	0.00014	0.00027	0.00013[4]
alpha-BHC	µg/L	0.026	0.013	0.0079	0.0039[4]
beta-BHC	µg/L	0.092	0.046	0.028	0.014
Endosulfan Sulfate	µg/L	480	240	220	110
Endrin Aldehyde	µg/L	1.6	0.81	1.5	0.76
Gamma-BHC	µg/L	0.12	0.063	0.039	0.019[4]
PCBs	µg/L	0.00034	0.00017	0.00034	0.00017[4]
Semi-Volatile Organic Compounds					
1,2 Dichlorobenzene	µg/L	600		600	
1,2-Diphenylhydrazine	µg/L	1.1	0.54	0.081	0.040[4]
1,3 Dichlorobenzene	µg/L	5,200	2,600	800	400
1,4 Dichlorobenzene	µg/L	5		5	
2,4,6-Trichlorophenol	µg/L	13	6.5	4.3	2.1[4]
2,4-Dichlorophenol	µg/L	1600	790	190	93
2,4-Dimethylphenol	µg/L	4,600	2,300	1100	540
2,4-Dinitrophenol	µg/L	28,000	14,000	140	70
2,4-Dinitrotoluene	µg/L	18	9.1	0.23	0.11[4]
2-Chloronaphthalene	µg/L	8,600	4,300	3,400	1,700
2-Chlorophenol	µg/L	800	400	241	120
2-Methyl-4,6-Dinitrophenol	µg/L	1540	765	26.9	13.4
3,3-Dichlorobenzidine	µg/L	0.16	0.077	0.088	0.04[4]
Acenaphthene	µg/L	5,400	2,700	2,400	1,200
Anthracene	µg/L	220,000	110,000	19,000	9,600

Constituent	Units	Discharge Limitations			
		Other Waters		MUN[3]	
		Daily Max	Monthly Avg.	Daily Max	Monthly Avg.
Benzidine	µg/L	0.0011	0.00054	0.00025	0.00012[4]
Benzo(a)Anthracene	µg/L	0.098	0.049	0.0089	0.0044[4]
Benzo(a)Pyrene	µg/L	0.098	0.049	0.0089	0.0044[4]
Benzo(b)Fluoranthene	µg/L	0.098	0.049	0.0089	0.0044[4]
Benzo(k)Fluoranthene	µg/L	0.098	0.049	0.0089	0.0044[4]
Bis(2-Chloroethyl)Ether	µg/L	2.8	1.4	0.063	0.031[4]
Bis(2-Chloroisopropyl)Ether	µg/L	340,000	170,000	2,800	1,400
Bis(2-Ethylhexyl)Phthalate	µg/L	11	5.9	3.7	1.8[4]
Butylbenzyl Phthalate	µg/L	10,000	5,200	6,000	3,000
Chrysene	µg/L	0.098	0.049	0.0089	0.0044[4]
Dibenzo(a,h)Anthracene	µg/L	0.098	0.049	0.0089	0.0044[4]
Diethyl Phthalate	µg/L	240,000	120,000	46,000	23,000
Dimethyl Phthalate	µg/L	5,800,000	2,900,000	629,000	313,000
Di-n-Butyl Phthalate	µg/L	24,000	12,000	5,400	2,700
Fluoranthene	µg/L	740	370	600	300
Fluorene	µg/L	28,000	14,000	2,600	1,300
Hexachlorobenzene	µg/L	0.0016	0.00077	0.0015	0.00075[4]
Hexachlorobutadiene	µg/L	100	50	0.89	0.44[4]
Hexachlorocyclopentadiene	µg/L	34,000	17,000	480	240
Hexachloroethane	µg/L	18	8.9	3.8	1.9
Indeno(1,2,3-cd) Pyrene	µg/L	0.098	0.049	0.0088	0.0044[4]
Isophorone	µg/L	1200	600	17	8.4
Naphthalene	µg/L	21		21	
Nitrobenzene	µg/L	3,800	1,900	34	17
N-Nitrosodimethyl amine (NDMA)	µg/L	16	8.1	0.0014	0.00069[4]
N-Nitrosodi-n-Propylamine	µg/L	2.8	1.4	0.011	0.005[4]
N-Nitrosodiphenylamine	µg/L	32	16	10	5.0
Phenol	µg/L	1,000	no limit	1,000	no limit
Pyrene	µg/L	22,000	11,000	1930	960
Miscellaneous					
Asbestos	fib/L	no limit	no limit	14,000,000	7,000,000
Di-isopropyl ether (DIPE)	µg/L	0.8	0	0.8[4]	
1,4-Dioxane	µg/L	3		3	
Perchlorate	µg/L	6		6	
2,3,7,8-TCDD (Dioxin)	µg/L	0.000000028	0.000000014	0.000000026	0.000000013[4]
Tertiary butyl alcohol (TBA)	µg/L	12		12	
Total petroleum hydrocarbons	µg/L	100		100	

b. <u>Limits applicable to discharges to freshwater waterbodies where no TMDLs has been established</u>

i. Table 3-Hardness-dependent metals

Hardness (mg/L)	Units	up to 200		200 – 300		300 and above	
		Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
Cadmium	µg/L	2.8	5	4.1	5	5	5
Copper	µg/L	10.4	20.8	16.6	33.3	22.1	44.4
Lead	µg/L	4.4	8.7	8.3	16.7	12.8	25.6
Nickel	µg/L	60	100	90	100	100	100
Silver	µg/L	4.0	8.1	10	20	20	41
Zinc	µg/L	86	170	130	260	170	350

ii. Table 4-Other compounds

Constituents	Units	Discharge Limitations			
		Other Waters		MUN[3]	
		Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.
Metals					
Antimony	µg/L	6		6	
Arsenic	µg/L	10		10	
Beryllium	µg/L	4		4	
Chromium III	µg/L	50		50	
Chromium VI	µg/L	16	8	16	8
Cyanide	µg/L	8.5	4.2	8.5	4.2[5]
Mercury	µg/L	0.1	0.05[4]	0.1	0.05[5]
Selenium	µg/L	8	4	8	4
Thallium	µg/L	13	6	3.4	1.7
Organic Compounds					
Pentachlorophenol	µg/L	1.5	0.73	0.56	0.28[5]
Chlordane	µg/L	0.0012	0.00059	0.0012	0.00057[5]
4,4'-DDT	µg/L	0.0012	0.00059	0.0012	0.00059[5]
Dieldrin	µg/L	0.00028	0.00014	0.00028	0.00014[5]
alpha-Endosulfan	µg/L	0.092	0.046	0.092	0.046[5]
beta-Endosulfan	µg/L	0.092	0.046	0.092	0.046[5]
Endrin	µg/L	0.059	0.029	0.059	0.029[5]
Heptachlor	µg/L	0.00042	0.00021	0.00042	0.00021[5]
Heptachlor Epoxide	µg/L	0.00022	0.00011	0.00020	0.00010[5]
Toxaphene	µg/L	0.0015	0.00075	0.0015	0.00073[5]

c. Limits applicable to discharges to freshwater waterbodies where TMDLs has been established

iii. Table 5-Los Angeles River and Tributaries Metals TMDL[6]

[5] If the reported detection level is greater than the effluent limit for this constituent, then a non detect using ML detection is deemed to be in compliance.

Reach	Units	Copper		Lead		Zinc		Selenium		Cadmium	
		Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.
Reach 5 and 6	µg/L	30	15	19	9.5			5	2.5	3.1	1.6
Reach 4	µg/L	26	13	10	5					3.1	1.6
Reach 3 above LA-Glendale WRP and Verdugo	µg/L	23	11.5	12	6					3.1	1.6
Reach 3 below LA-Glendale WRP	µg/L	26	13	12	6					3.1	1.6
Burbank Western Channel (above WRP)	µg/L	26	13	14.	7					3.1	1.6
Burbank Western Channel (below WRP)	µg/L	19	9.5	9.1	4.5					3.1	1.6
Reach 2 and Arroyo Seco	µg/L	22	11	11	5.5					3.1	1.6
Reach 1	µg/L	23	11.5	12	6					3.1	1.6
Compton Creek	µg/L	19	9.5	8.9	4.5					3.1	1.6
Rio Hondo Rch. 1	µg/L	13	12.5	5.0	2.5	131	65.5			3.1	1.6

ii. Table 6-Ballona Creek and Tributaries Metals TMDL[6]

Constituents	Units	Discharge Limitations	
		Daily Max.	Monthly Avg.
Metals			
Copper	µg/L	24	12.5
Lead	µg/L	13	6.5
Selenium	µg/L	5	2.5
Zinc	µg/L	304	152

iii Table 7-San Gabriel River and its Tributaries

Reach	Units	Copper	Lead	Zinc	Selenium

[6] This effluent limit shall be deemed vacated at such time as Regional Board Resolutions R05-006 and R05-007 are vacated in compliance with a writ of mandate in the mater of Cities of Bellflower et al v. State Water Resources Control Board et al, Los Angeles Superior Court #BS101732. The Regional Board shall provide notice to the discharger of any such action.

		Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.
San Jose Creek Reach 1 (Confluence to temple street)	µg/L							5	2.5
San Jose Creek Reach 2 (Temple St. to I-10 at White Ave.)	µg/L							5	2.5
San Gabriel River Reach 1 (Firestone to Estuary)	µg/L	18	9						
San Gabriel River Reach 2 (Whittier Narrows to Firestone)	µg/L			166	83				
Coyote Creek	µg/L	20	10	106	53	158	79		
Estuary	µg/L	3.7	1.8						

iv. Table 8-Calleguas Creek, its Tributaries and Mugu Lagoon

Reach	Units	Copper		Nickel		Selenium	
		Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.
1-Mabu Lagoon	µg/L	----	5.6	----	8.2	----	----
2- Calleguas Creek South	µg/L	----	13.7	----	8.2	----	----
3- Revolon Slough	µg/L	----	27	----	149	----	----
4- Calleguas Creek North	µg/L	----	3.7	----	8.3	----	5
5-Beardsley Channel	µg/L	----	3.7	----	8.3	----	5
6-Arroyo Las Posas	µg/L	----	----	----	----	----	----
7-Arroyo Simi	µg/L	----	----	----	----	----	----
8-Tapo Canyon	µg/L	----	----	----	----	----	----
9-Conejo Creek	µg/L	----	29.1	----	160	----	----
10-Hill Canyon reach of Conejo Creek	µg/L	----	29.1	----	160	----	----
11-Arroyo Santa Rosa	µg/L	----	29.1	----	160	----	----
12-North Fork Conejo Creek	µg/L	----	29.1	----	160	----	----
13-Arroyo Conejo (S.Fork Conejo Cr)	µg/L	----	29.1	----	160	----	----

Table 9-TMDL for Organochloride (OC) Pesticides, Polycholrinated Biphenyls (PCBs) in Calleguas Creek, Its Tributaries, and Magu Lagoon

Constituents	Units	Discharge Limitations	
		Daily Max.	Monthly Avg.
Chlordane	ng/L	1.2	0.59[5]
4,4-DDD	ng/L	1.7	0.84[5]
4,4-DDE	ng/L	1.2	0.59[5]
4,4-DDT	ng/L	1.2	0.59[5]
Dieldrin	ng/L	0.28	0.14[5]
PCBs	ng/L	0.34	0.17[5]
Toxaphene	ng/L	0.33	0.16[5]

d. Table 10-Limits applicable to discharges to saltwater waterbodies

Constituents	Units	Discharge Limitations	
		Daily Max.	Monthly Avg.
Metals			
Antimony	µg/L	6	
Arsenic	µg/L	10	5
Beryllium	µg/L		
Cadmium	µg/L	5	
Chromium III	µg/L	50	
Chromium VI	µg/L	82	41
Copper	µg/L	5.8	2.9
Cyanide	µg/L	1.0	0.50[5]
Lead	µg/L	14	7
Mercury	µg/L	0.1	0.05[5]
Nickel	µg/L	14	6.7
Selenium	µg/L	120	58
Silver	µg/L	2.2	1.1
Thallium	µg/L	13	6
Zinc	µg/L	95	47
Organic Compounds			
Pentachlorophenol	µg/L	13	6.4
Chlordane	µg/L	0.0012	0.00059[5]
4,4'-DDT	µg/L	0.0012	0.00059[5]
Dieldrin	µg/L	0.00028	0.00014[5]
Alpha-Endosulfan	µg/L	0.014	0.0071[5]
Beta-Endosulfan	µg/L	0.014	0.0071[5]
Endrin	µg/L	0.0038	0.0019[5]
Heptachlor	µg/L	0.00042	0.00021[5]
Heptachlor Epoxide	µg/L	0.00022	0.00011[5]
Toxaphene	µg/L	0.00033	0.00016[5]

2. The pH of the discharge shall at all times be within the range of 6.5 and 8.5.

3. The temperature of the discharge shall not exceed 86°F.

4. Attachment B establishes the applicable effluent limits for mineral and nitrogen constituents for discharges covered by this Order. The discharge of an effluent with mineral and nitrogen constituents in excess of applicable limits established in Attachment B is prohibited. In the letter of determination, the Executive Officer shall indicate the watershed/stream reach limitations in Attachment B applicable to the particular discharge. Creekside construction dewatering discharges covered under Part D.2.d.vi are determined to have hydrologic connection and/or similar water chemistry between groundwater and surface water. Therefore, since the groundwater and surface water are essentially the same, discharges qualified under creekside dewatering as approved by Executive Office are not required to comply with Attachment B (TDS, sulfate, chloride) except for nitrogen and boron.

5. Pass-through or uncontrollable discharges of PCBs shall not exceed daily average concentrations of 14 ng/L into fresh waters or 30 ng/L into estuarine waters.

6. The acute toxicity of the effluent shall be such that the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test less than 70% survival.

7. The discharge shall meet effluent limitations and toxic and effluent standards established pursuant to sections 301, 302, 304, 306, and 307 of the Clean Water Act, and amendments thereto.

C. Land Discharge Specifications

Not Applicable.

D. Reclamation Specifications

Not Applicable.

VI. RECEVING WATER LIMITATIONS

A. Surface Water Limitations

The discharge shall not cause the following to be present in receiving waters:

a. Toxic pollutants at concentrations that will bioaccumulate in aquatic life to levels that are harmful to aquatic life or human health.

b. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

c. Chemical substances in amounts that adversely affect any designated beneficial use.

d. Visible floating materials, including solids, liquids, foams, and scum.

e. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water.

f. Suspended or settleable materials in concentrations that cause nuisance or adversely affect beneficial uses.

g. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses.

h. Substances that result in increases of $BOD_5$20°C that adversely affect beneficial uses.

i. Fecal coliform concentration which exceed a log mean of 200 per 100 ml (based on a minimum of not less than five samples equally spaced over a 30-day period), any single sample shall not exceed 400 per 100 ml.

j. Concentrations of toxic substances that are toxic to, or cause detrimental physiological responses in, human, animal, or aquatic life.

2. The discharge shall not cause the following to occur in the receiving waters:

a. The dissolved oxygen to be depressed below:

WARM[1] designated waters	5 mg/L
COLD[1] designated waters	6 mg/L
COLD and SPWN[1] Designated waters	7 mg/L

[1] Beneficial Uses: WARM - Warm Freshwater Habitat; COLD - Cold Freshwater Habitat; SPWN - Spawning, Reproduction, and/or Early Development.

b. The pH to be depressed below 6.5 or raised above 8.5, and the ambient pH levels to be changed from natural conditions in inland waters more than 0.5 units or in estuaries more than 0.2 units.

c. The temperature at any time or place and within any given 24-hour period to be altered by more than 5°F above natural temperature; but at no time be raised above 80°F for waters with a beneficial use of WARM (Warm Freshwater Habitat).

d. The turbidity to increase to the extent that such an increase causes nuisance or adversely affects beneficial uses; such increase shall not exceed 20% when the natural turbidity is over 50 NTU or 10% when the natural turbidity is 50 NTU or less.

e. Residual chlorine in concentrations that persist and impairs beneficial uses.

f. Any individual pesticide or combination of pesticides in concentrations that adversely affect beneficial uses or increase pesticide concentration in bottom sediments or aquatic life.

3. The discharge shall not alter the color, create a visual contrast with the natural appearance, nor cause aesthetically undesirable discoloration of the receiving waters.

4. The discharge shall not degrade surface water communities and population including vertebrate, invertebrate, and plant species.

5. The discharge shall not damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload their design capacity.

6. The discharge shall not cause problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.

B. Groundwater Limitations

Not Applicable.

VII. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. The Discharger shall comply with the following provisions:

a. The Executive Officer may require any discharger authorized under this Order to apply for and obtain an individual NPDES permit with more specific requirements. The Executive Officer may require any discharger authorized to discharge under this permit to apply for an individual permit only if the discharger has been notified in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application, and a statement that on the effective date of the individual permit, the authority to discharge under this general permit is no longer applicable.

b. The discharger shall comply with all the applicable items of the *Standard Provisions and Reporting for Waste Discharge Requirements* (Standard Provisions), which are part of this general permit (Attachment D). If there is any conflict between provisions stated herein and the Standard Provisions, those provisions stated herein prevail.

c. Prior to application, the discharger shall submit for Executive Officer's approval the list of chemicals and proprietary additives that may affect the discharge, including rates/quantities of application, compositions, characteristics, and material safety data sheets, if any.

d. Oil or oily materials, chemicals, refuse, or other materials that may cause pollution in storm water and/or urban runoff shall not be stored or deposited in areas where they may be picked up by rainfall/urban runoff and discharged to surface waters. Any spill of such materials shall be contained, removed and cleaned immediately.

e. This Order neither exempts the discharger from compliance with any other laws, regulations, or ordinances that may be applicable, nor legalizes the waste disposal facility.

f. The discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order.

h. Any discharge authorized under this Order may request to be excluded from the coverage of this Order by applying for an individual permit.

i. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from treatment facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

B. Monitoring and Reporting Program Requirements

The Executive Officer is herby authorized to prescribe a Monitoring and Reporting Program for each authorized discharger. The Discharger shall comply with the MRP accompanying the transmittal for enrollment under this General NPDES permit, and future revisions thereto. If there is any conflict between provisions stated in the MRP and the Regional Water Board Standard Provisions, those provisions stated in the MRP shall prevail.

C. Special Provisions

1. Reopener Provision

a. This Order may be modified, revoked and reissued, or terminated for cause. Reasons for modification may include new information on the impact of discharges regulated under this Order become available, promulgation of new effluent standards and/or regulations, adoption of new policies and/or water quality objectives, and/or new judicial decisions affecting requirements of this Order.

b. Pursuant to 40 CFR sections 122.62 and 122.63, this Order may be modified, revoked and reissued, or terminated for cause. Reasons for modification may include new information on the impact of discharges regulated under this Order become available, promulgation of new effluent standards and/or regulations, adoption of new policies and/or water quality objectives, and/or new judicial decisions affecting requirements of this Order. In addition, if receiving water quality is threatened due to discharges covered under this permit, this permit will be reopened to incorporate more stringent effluent limitations for the constituents creating the threat. TMDLs have not been developed for all the parameters and receiving waters on the 303(d) list. When TMDLs are developed this permit may be reopened to incorporate appropriate limits. In addition, if TMDL identifies that a particular discharge covered under this permit is a load that needs to be reduced; this permit will be reopened to incorporate appropriate TMDL based limit and/or to remove any applicable exemptions.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

Not Applicable

3. Best Management Practices and Pollution Prevention

All Dischargers are encouraged to implement Best Management Practices and Pollution Prevention Plans to minimize pollutant concentrations in the discharge.

4. Construction, Operation and Maintenance Specifications

All owners or operators authorized discharge under the General Permit shall maintain and update, as necessary, a Groundwater Treatment System Operation and Maintenance (O&M) Manual to assure efficient and effective treatment of contaminated groundwater (pollutants concentrations above water quality criteria and goals). The O&M Manual shall address, but not limited to, the following.

The O&M manual shall specify both normal operating and critical maximum or minimum values for treatment process variables including influent concentrations, flow rates, water levels, temperatures, time intervals, and chemical feed rates.

The O&M manual shall specify an inspection and maintenance schedule for active and reserve system and shall provide a log sheet format to document inspection observations and record completion of maintenance tasks.

The O&M manual shall include a Contingency and Notification Plan. The plan shall include procedures for reporting personnel to assure compliance with this General Permit, as well as authorization letters from the Executive Officer.

The O&M manual shall specify safeguards to prevent noncompliance with limitations and requirements of the General Permit resulting from equipment failure, power loss, vandalism, or ten-year return frequency rainfall.

5. Engineering Design Report

For all new dischargers and existing dischargers where significant changes have made since prior submittals to the Regional Water Board, the NOI shall be accompanied by treatment flow schematic diagram and a certification, which demonstrates that the treatment process and the physical design of the treatment components will ensure compliance with the prohibitions, effluent limitations, and other conditions of the General Permit.

7. Special Provisions for Municipal Facilities (POTWs Only)

Not Applicable

8. Other Special Provisions

a. Expiration and Continuation of this Order

This Order expires on June 5, 2013; however, for those dischargers authorized to discharge under this Order, it shall continue in full force and effect until a new order is adopted. Notwithstanding Provision J (Expiration and Continuation of this Order) of Order No. R4-2003-0111, discharges regulated under Order No. R4-2003-0111 on or before sixtieth day of notification of adoption of this Order, that has submitted a completed NOI may continue under Order No. R4-2003-0111 until enrolled under this General Permit.

b. Reauthorization

Upon reissuance of a new general permit order, dischargers authorized under this Order shall file a Notice of Intent or a new Report of Waste Discharge within 60 days of notification by the Executive Officer.

c. Rescission

Except for enforcement purposes, Order No. R4-2003-0111, adopted by this Regional Board on August 7, 2003, is rescinded effective June 5, 2008.

9. Compliance Schedules

Not Applicable

VIII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section V of this Order will be determined as specified below:

A. General.

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

B. Multiple Sample Data.

When determining compliance with an AMEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

C. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The

Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

D. Average Weekly Effluent Limitation (AWEL).

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

E. Maximum Daily Effluent Limitation (MDEL).

If a daily discharge <(or when applicable, the median determined by subsection B above for multiple sample data of a daily discharge)> exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

F. Instantaneous Minimum Effluent Limitation.

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

G. Instantaneous Maximum Effluent Limitation.

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

DEFINITIONS, ACRONYMS & ABBREVIATIONS

DEFINITIONS

Arithmetic Mean (μ), also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA) is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance

between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL) means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = ($X_{n/2}$ + $X_{(n/2)+1}$)/2 (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND) are those sample results less than the laboratory's MDL.

Ocean Waters are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Reporting Level (RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System is the portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ) is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ACRONYMS & ABBREVIATIONS

AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	*Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand
BPT	Best practicable treatment control technology
C	Water Quality Objective
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ECA	Effluent Concentration Allowance
ELAP	California Department of Health Services Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
gpd	gallons per day
IC	Inhibition Coefficient
IC_{15}	Concentration at which the organism is 15% inhibited
IC_{25}	Concentration at which the organism is 25% inhibited
IC_{40}	Concentration at which the organism is 40% inhibited
IC_{50}	Concentration at which the organism is 50% inhibited
LA	Load Allocations
LOEC	Lowest Observed Effect Concentration
LTA	Long-Term Average
MDEL	Maximum Daily Effluent Limitation
MDL	Method Detection Limit
MEC	Maximum Effluent Concentration
MGD	Million Gallons Per Day
mg/L	Milligrams per Liter
ML	Minimum Level
MRP	Monitoring and Reporting Program
ND	Not Detected
NOEC	No Observable Effect Concentration
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NTR	National Toxics Rule
OAL	Office of Administrative Law

POTW	Publicly-Owned Treatment Works
PMP	Pollutant Minimization Plan
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
RPA	Reasonable Potential Analysis
RWQCB	Regional Water Quality Control Board
SCP	Spill Contingency Plan
SIP	State Implementation Policy (*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*)
SMR	Self Monitoring Reports
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Test Acceptability Criteria
TDS	Total Dissolved Solids
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TRE	Toxicity Reduction Evaluation
TSD	Technical Support Document
TSS	Total Suspended Solid
TU	Toxicity Unit
USEPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Waste Load Allocations
WQBEL	Water Quality-Based Effluent Limitation
µg/L	Micrograms per Liter

California Regional Water Quality Control Board

Los Angeles Region

Linda S. Adams
Agency Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: http://www.waterboards.ca.gov/losangeles

Arnold Schwarzenegger
Governor

NOTICE OF INTENT

TO COMPLY WITH GENERAL WASTE DISCHARGE REQUIREMENTS
AND
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

SECTION I. DISCHARGE STATUS

Check only one item.

A. New Discharge ☐ B. Material Change ☐ C. Existing Discharge ☐ CI # _____

SECTION II. OWNER/OPERATOR & FACILITY INFORMATION

A. OWNER

Name/Agency		Contact Person		
Mailing Address		Title of Contact Person		
City	County	State	ZIP	Phone

B. OPERATOR (*If different from owner*)

Name/Agency		Contact Person		
Mailing Address		Title of Contact Person		
City	County	State	ZIP	Phone

C. FACILITY

Name		Owner Type (check one) 1. ☐City 2.☐ County 3.☐ State 4. ☐Fed 5. ☐Private		
Address		Contact email address		
City	County	State	ZIP	Phone

D. STANDARD INDUSTRIAL CLASSIFICATION CODE (SIC) (4 digit code in order of priority)

1.)	(specify)	2.)	(specify)
3.)	(specify)	4.)	(specify)

Nature of Business (provide a brief description)

SECTION III. APPLICABLE GENERAL PERMIT FOR DISCHARGE

Check only one item.

- ☐ Volatile Organic Compounds Contaminated Groundwater (Order No. R4-2007-0022), Include Supplemental Analysis
- ☐ Wastewaters from Investigation and/or Cleanup of Petroleum Fuel Pollution (Order No. R4-2007-0021), Include Supplemental Analysis
- ☐ Discharges of Groundwater from Potable Water Supply Wells (Order No. R4-2003-0108), Include Attachment A – Screening Levels
- ☐ Discharges of Groundwater from Construction and Project Dewatering (Order No. R4-2008-0032), Include Supplemental Analysis
- ☐ Discharge of Nonprocess Wastewater (Order No. R4-2009-0047), Include Supplemental Analysis
- ☐ Hydrostatic Test Water (Order No. 2009-0068), Include Attachment A – Screening Levels

SECTION IV. EXISTING REQUIREMENTS/PERMITS (Skip if not applicable)

List any active Orders or Permits adopted by this Regional Board for the facility.

A. Order No. _____ _____ _____

B. NPDES Permit(s) _____ _____ _____

SECTION V. OUTFALL AND RECEIVING WATER INFORMATION

List outfall and receiving waterbody (river; stream; channel; lake; ocean; etc.)

Outfall Number (list)	Latitude			Longitude			Receiving Water (Name)
	Deg	Min	Sec	Deg	Min	Sec	

SECTION VI. PROJECT DESCRIPTION AND TREATMENT PROCESS DESCRIPTION (if applicable)

Provide description of the project and the discharge requiring NPDES permit. If additives are added to your process, briefly describe their composition if the information is available. If treatment is necessary prior to discharge, attached a schematic flow diagram and provide description of all treatment processes. In addition, include the proposed maximum daily discharge volume in gallons per day (gpd), the approximate start-up date for the project and discharge, and the projected discharge duration. (attach additional sheets, if necessary)

Proposed Maximum Discharge Flow (gallons per day (gpd))	
Proposed discharge startup date	
Estimated discharge duration	

SECTION VII. DISCHARGE QUALITY INFORMATION

This NOI requires that you obtain and analyze representative influent wastewater sample for the pollutants listed on Attachment A.

Have you included a completed **Supplemental Pollutants Analysis/Measurements Form?** ..... ☐ Yes ☐ No

OR:

Have you included a completed Attachment A – **Screening for Potential Pollutants of Concern in Potable Water?**
(Applies only to potable water related discharges.) ..... ☐ Yes ☐ No

If No, explain.

(Note: Include the analytical data from the laboratory with the screening forms)

SECTION VIII. OTHER REQUIRED INFORMATION

Provide a 7.5' USGS Quadrangle Map (Scale 1:24,000) showing the project location and identifying surface water to which you propose to discharge.

Fees: Have you included appropriate filing fee with this submittal? (Applicable to new enrollees only)
Make checks payable to the Water Resources Control Board

SECTION IX. CERTIFICATION AND SIGNATURE (see appendix on who is authorized to sign)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I assure that the provisions of the permit will be complied with."

Printed Name of Person Signing

Date

Signature

Title

SECTION X. FORM SUBMITTAL

Send this completed Notice of Intent to:
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

Assistance with this form may be obtained by contacting the Regional Board at:
Phone (213) 576-6600
Fax (213) 576-6660

INSTRUCTIONS
FOR COMPLETING THE NOTICE OF INTENT FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMITS FOR DISCHARGE OF WASTEWATERS TO SURFACE WATERS

These instructions are intended to help you, the discharger, complete the Notice of Intent (NOI) form for general permits. Please type or print clearly when completing the NOI form and the vicinity map(s).

One NOI should be submitted by each owner/operator to cover all proposed discharges within the boundaries of this Regional Board.

Section I. Discharge Status
Please check appropriate box indicating whether this application is for new discharge, material change, or existing discharge. If it is an existing discharge, indicate four digit CI #.

Section II. Facility/Discharge Information
Section II.A. Owner
Name/Agency – The name (first and last)of the owner/operator of the facility. If the owner/operator is a company, corporation, etc., please put the name of the company, corporation, etc., in this space.
Contact Person – Please list the name (first and last) of the contact person for the owner/operator (agency, corporation, private business, etc.) listed above.
Mailing Address – The street number and street name where mail and correspondence should be sent (P.O. Box is acceptable).
City, County, State, Zip Code – The city, county, state, Zip code that apply to the mailing address given.
Title of Contact Person – The official company title of the contact person.
Phone – The daytime telephone number of the contact person.

Section II.B. Operator (If different from owner)
Name/Agency – The name (first and last)of the owner/operator of the facility. If the owner/operator is a company, corporation, etc., please put the name of the company, corporation, etc., in this space.
Contact Person – Please list the name (first and last) of the contact person for the owner/operator (agency, corporation, private business, etc.) listed above.
Mailing Address – The street number and street name where mail and correspondence should be sent (P.O. Box is acceptable).
City, County, State, Zip Code – The city, county, state, Zip code that apply to the mailing address given.
Title of Contact Person – The official company title of the contact person.
Phone – The daytime telephone number of the contact person

Section II.C. Facility
Name – The name (first and last) of the person responsible for this facility.
Address – The street number and street name where the facility or actual discharge is located. Check the most appropriate ownership, City, County, State, Federal or Private.
E-mail Address – Please list the e-mail address of the contact person for the owner/operator (agency, corporation, private business, etc.) listed above.
City, County, State, Zip Code – The city, county, state, Zip code that apply to the facility address.

Phone – The daytime telephone number of the person responsible for this facility.

Section II.D. Standard Industrial Classification (SIC) (4 digit code in order of priority)

List, in descending order of significance, the 4—digit standard industrial classification (SIC) codes which best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words. These classification may differ from the SIC codes describing the operations generating discharge, air emissions, or hazardous wastes.

SIC code numbers are descriptions which may be found in the "Standard Industrial Classification Manual" prepared by the Executive Office of the President, Office of Management and Budget, which is available from the Government Printing Office, Washington, D. C.. Use current edition of the manual. If you have any question concerning the appropriate SIC code for your facility the NPDES Permitting Units of the Regional Water Quality Control Board.

Section III. Type of Discharge
Check the appropriate box indicating the type of discharge for this facility. Check only one box.

Section IV. Existing Requirements/Permits
If this facility has no existing permits or orders, skip this section. If the facility has any existing permits or orders, list it in the appropriate space provided.

Section V. Outfall and Receiving Water Information
If the facility discharges into a storm drain, indicate the immediate receiving waterbody (listed in the Basin Plan) where the discharge drains into.

Section VI. Description of Project/Discharge
Provide summary description of the project. Also describe the general characteristic of the discharge. If required, indicate the treatment process that would be needed to bring the discharge into compliance. Provide estimate of maximum discharge flow rate, proposed discharge startup date, and estimated discharge duration.

Section VII. Discharge Quality
This NOI requires that you obtain and analyze for the pollutants listed on the *Supplemental Pollutants Analysis/Measurements* or, *Attachment A – Screening Levels for Potential Pollutants of Concern in Potable Water (applies to potable water related discharges only)*. Check the YES box if analytical result is attached. If not, provide reasons why it was not included. Note that processing of your NOI application may be delayed until this required information is provided.

Section VIII. Other Required Information
Attach to this application a topographic map (7.5' USGS Quadrangle Map, Scale 1:24,000) of the area. The map must show the outline of the facility.

Section IX. Certification and Signature
Printed Name of Person Signing – Please type or print legibly. This section should be filled out by the responsible person as defined by 40 CFR 122.22.
Signature and Date – Signature of name printed above and the date signed.
Title – The professional title of the person signing the NOI.

Required signatories per 40 CFR 122.22

1. For a corporation
   By responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (I) A president, secretary, treasurer or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy-or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental laws and regulations; the manager can assure that the necessary systems are established or action taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship
   By a general partner or the proprietor, respectively; or

3. For a municipality, State, Federal or public agency
   By either a principal executive officer or ranking elected official. For the purposes of this section, a principal executive officer of a Federal agency includes: (I) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operation of a principal geographic unit of the agency.

NPDES Application Supplemental Requirements

I. Pollutants Analysis/Measurements

Analysis/measurement for the following pollutants should accompany the NPDES application for discharges of wastewater to surface waters.

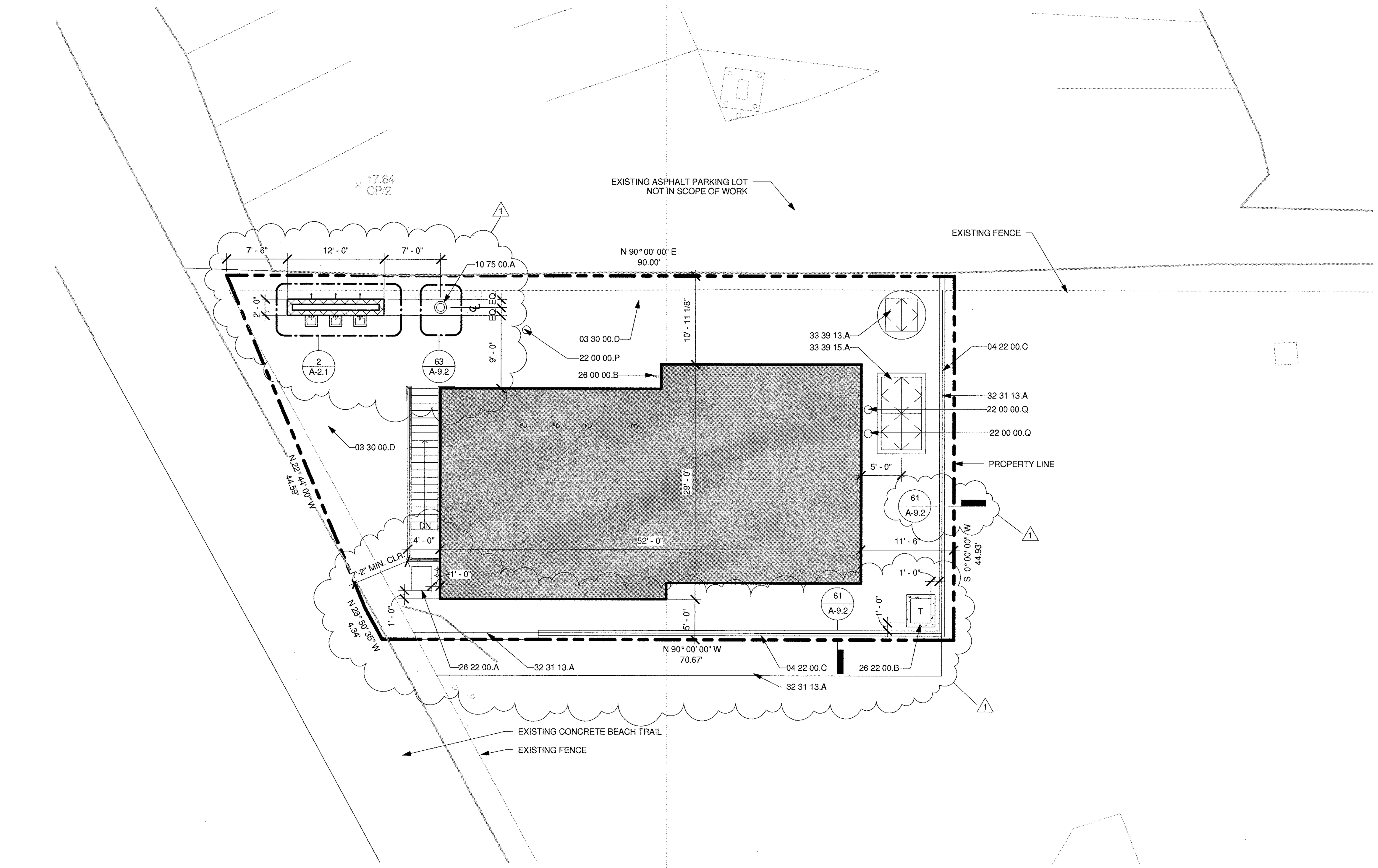
Table I. List of Pollutants Analysis/Measurements

ID Num.	Pollutant	Quantitation Level	Screening Levels		Minimum Levels (ML)
			MUN[a]	Others[b]	
		Unit – (µg/L)	Unit – (µg/L)		Unit – (µg/L)
	Metals[d]				
1097	Antimony (Sb)		14	4300	5
1000	Arsenic (As)		50	36	10
1012	Beryllium (Be)		4	--	0.5
1027	Cadmium (Cd)		2.4	9.4	0.5
1033	Chromium III (Cr3+)		50	--	10
1032	Chromium VI (Cr6+)		11	50	5
1119	Copper (Cu)		9.4	3.7	0.5
720	Cyanide (CN)		5.2	--	5
1051	Lead (Pb)		3.2	8.5	0.5
71900	Mercury (Hg)		0.050	0.051	0.2
1067	Nickel (Ni)		52	8.3	1
1147	Selenium (Se)		5.0	71	2
1077	Silver (Ag)		4	2.2	0.25
1059	Thallium (Ti)		1.7	6.3	1
1092	Zinc (Zn)		122	86	20
	(a) = Metals concentrations are expressed as total recoverable				
	Volatile Organic Compounds				
34496	1,1 Dichloroethane		5	5	1
34501	1,1 Dichloroethylene		0.057	3.2	0.5
34506	1,1,1 Trichloroethane		200	200	2
34511	1,1,2 Trichloroethane		0.60	42	0.5
34516	1,1,2,2 Tetrachloroethane		0.17	11	0.5
34536	1,2 Dichlorobenzene		600	17000	0.5
32103	1,2 Dichloroethane		0.38	99	0.5
34541	1,2 Dichloropropane		0.52	39	0.5
34549	1,2-Trans Dichloroethylene		10	140000	1
34566	1,3 Dichlorobenzene		400	2600	2
34561	1,3 Dichloropropylene		0.5	0.5	0.5
34571	1,4 Dichlorobenzene		5	0.5	0.5
34576	2-Chloroethyl vinyl ether		--	--	1
34210	Acrolein		100	100	5
34215	Acrylonitrile		0.059	0.66	2.0
34030	Benzene		1.0	1.0	0.5
32104	Bromoform		4.3	360	0.5
32102	Carbon Tetrachloride		0.25	4.4	0.5
34301	Chlorobenzene		30	21000	2
34306	Chlorodibromo-methane		0.401	34	0.5
85811	Chloroethane		100	100	2
32106	Chloroform		100	100	2
32101	Dichlorobromo-methane		0.56	46	0.5
78113	Ethylbenzene		700	700	2
34413	Methyl Bromide		10	4000	2
34418	Methylene Chloride		4.7	1600	0.5
34475	Tetrachloroethylene		0.8	8.85	0.5
34010	Toluene		150	150	2
39180	Trichloroethylene		2.7	5	0.5
39175	Vinyl Chloride		0.5	0.5	0.5
63	Xylenes		1750	1750	na
	Acetone		700	700	na
	Ethylene Dibromide		0.05	0.05	na
	Methyl Chloride		3	3	0.5

[a] Applies to water with Municipal and Domestic Supply (MUN) (indicated with E and I in the Basin Plan) beneficial uses designations.

[b] Applies to all other receiving waters.

ID Num.	Pollutant	Quantitation Level	Screening Levels		Minimum Levels (ML)
			MUN[a]	Others[b]	
		Unit – (µg/L)	Unit – (µg/L)		Unit – (µg/L)
	Methyl ethyl ketone		700	700	na
	Pesticides and PCBs				
39310	4,4'-DDD		0.00083	0.00084	0.05
39320	4,4'-DDE		0.00059	0.00059	0.05
39300	4,4'-DDT		0.00059	0.00059	0.01
78428	Alpha-Endosulfan		0.056	0.0087	0.02
39336	Alpha-BHC		0.0039	0.013	0.01
39330	Aldrin		0.00013	0.00014	0.005
34356	Beta-Endosulfan		0.056	0.0087	0.01
39338	beta-BHC		0.014	0.046	0.005
39350	Chlordane		0.00057	0.00059	0.1
34198	delta-BHC		--	--	0.005
39380	Dieldrin		0.00014	0.00014	0.01
34351	Endosulfan Sulfate		110	240	0.05
39390	Endrin		0.036	0.0023	0.01
34366	Endrin Aldehyde		0.76	0.81	0.01
39410	Heptachlor		0.00021	0.00021	0.01
39420	Heptachlor Epoxide		0.0001	0.00011	0.01
39340	gamma-BHC		0.019	0.063	0.02
4166	PCB 1016		0.00017	0.00017	0.5
4166	PCB 1221		0.00017	0.00017	0.5
4166	PCB 1232		0.00017	0.00017	0.5
4166	PCB 1242		0.00017	0.00017	0.5
4166	PCB 1248		0.00017	0.00017	0.5
4166	PCB 1254		0.00017	0.00017	0.5
4166	PCB 1260		0.00017	0.00017	0.5
39400	Toxaphene		0.00073	0.00075	0.5
	Semi – Volatile Organic Compounds				
34536	1,2 Dichlorobenzene		600	17000	0.5
34346	1,2 Diphenylhydrazine		0.040	0.54	1
34551	1,2,4 Trichlorobenzene		70	--	5
34566	1,3 Dichlorobenzene		400	2600	2
34571	1,4 Dichlorobenzene		5	2600	2
34586	2 Chlorophenol		120	400	5
34601	2,4 Dichlorophenol		93	790	5
34606	2,4 Dimethylphenol		540	2300	2
34616	2,4 Dinitrophenol		70	14000	5
34611	2,4 Dinitrotoluene		0.11	9.1	5
34624	2,4,6 Trichlorophenol		2.1	6.5	10
34626	2,6 Dinitrotoluene		--	--	5
34591	2-Nitrophenol		--	--	10
34581	2-Chloronaphthalene		1700	4300	10
34631	3,3' Dichlorobenzidine		0.04	0.077	5
	3-Methyl-4-Chlorophenol		--	--	1
3615	2-Methyl-4,6-Dinitrophenol		13	765	5
34646	4-Nitrophenol		--	--	5
34636	4-Bromophenyl phenyl ether		--	--	5
34641	4-Chlorophenyl phenyl ether		--	--	5
34205	Acenaphthene		1200	2700	1
34200	Acenaphthylene		--	--	10
34220	Anthracene		9600	110000	5
39120	Benzidine		0.00012	0.00054	5
34526	Benzo (a) Anthracene		0.0044	0.049	5
34247	Benzo (a) Pyrene		0.0044	0.049	2
34230	Benzo (b) Fluoranthene		0.0044	0.049	10
34521	Benzo (g,h,i) Perylene		--	--	5
34242	Benzo (k) Fluoranthene		0.0044	0.049	2
34278	Bis (2-Chloroethoxyl) methane		--	--	5
34273	Bis(2-Chloroethyl) ether		0.031	1.4	1
34283	Bis(2-Chloroisopropyl) ether		1400	170000	10
39100	Bis(2-Ethylhexyl) phthalate		1.8	5.9	5
34292	Butyl benzyl phthalate		3000	5200	10
34320	Chrysene		0.0044	0.049	5
34556	Dibenzo(a,h)-anthracene		0.0044	0.049	0.1



1 OVERALL ARCHITECTURAL SITE PLAN

A-5.1 | A-1.1 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO CIVIL PLANS FOR FURTHER INFORMATION.
2. REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION.
3. REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION.
4. REFER TO PLUMBING PLANS FOR FURTHER INFORMATION.

KEYNOTES

03 30 00.D	CONCRETE PAVING FOR VEHICULAR TRAFFIC. SEE CIVIL.
04 22 00.C	CMU RETAINING WALL. COLOR B. REFER TO CIVIL AND STRUCTURAL.
10 75 00.A	FLAG POLE
22 00 00.P	CLEAN OUT. REFER TO PLUMBING AND CIVIL.
22 00 00.Q	VENT PIPES. REFER TO PLUMBING AND CIVIL.
26 00 00.B	SECURITY CAMERA PROVIDED BY OWNER. CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.
26 22 00.A	TRANSFORMER HAND HOLE. REFER TO ELECTRICAL.
26 22 00.B	TRANSFORMER WITH CONCRETE HOUSEKEEPING PAD. REFER TO ELECTRICAL.
32 31 13.A	CHAIN LINK FENCE. REFER TO CIVIL.
33 39 13.A	PRECAST CONCRETE PUMP STATION WET WELL. REFER TO CIVIL.
33 39 15.A	PRECAST CONCRETE PUMP STATION VALVE VAULT. REFER TO CIVIL.

LEGEND

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EL SEGUNDO LS
ARCHITECTURAL SITE PLAN

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SHEET 13 OF 68
JOB NO. 1109531

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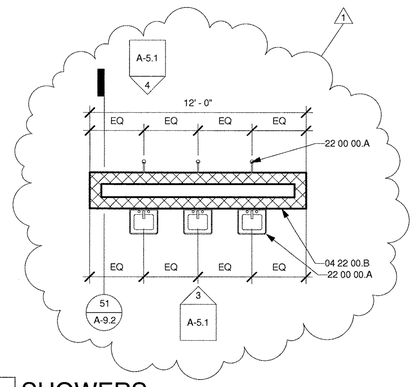
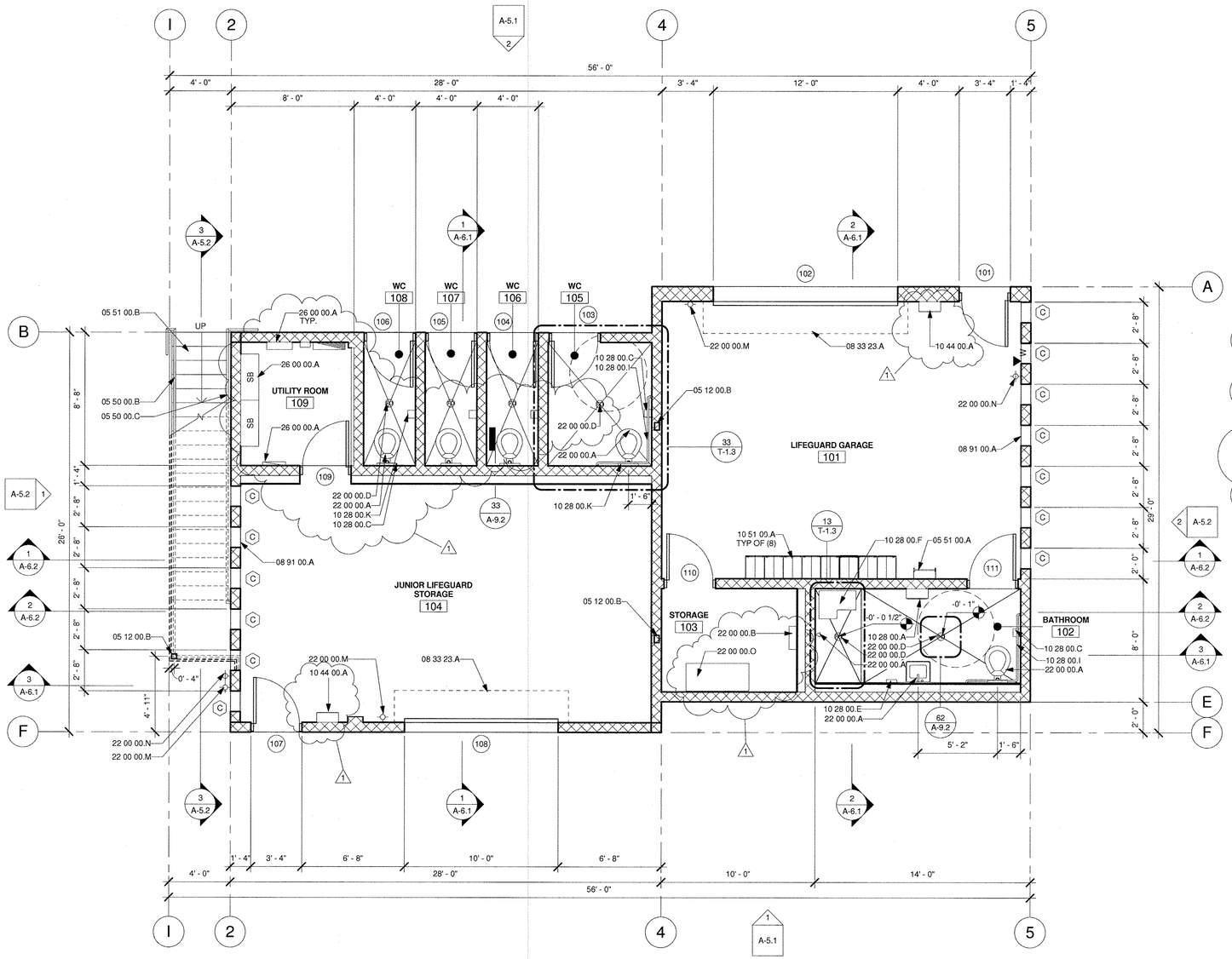


2 SHOWERS

A3 | A-2.1 | 1/4" = 1'-0"



1 GROUND FLOOR PLAN

A3 | A-2.1 | 1/4" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION.
2. REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION.
3. REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION.
4. REFER TO PLUMBING PLANS FOR FURTHER INFORMATION.
5. ALL FURNITURE AND EQUIPMENT IS BY OWNER AND IS SHOWN FOR COORDINATION PURPOSES ONLY.
6. REFER TO FINISH PLAN AND SCHEDULE FOR INTERIOR WALL, CEILING AND FLOOR FINSH INFORMATION.
7. DIMENSIONS ARE TO FACE OF FRAMING UNLESS SPECIFICALLY NOTED OTHERWISE.
8. PROVIDE ADEQUATE BLOCKING IN WALLS FOR CABINETS AND OTHER WALL MOUNTED ACCESSORIES INCLUDING BUT NOT LIMITED TO HANDRAILS, SHELVING AND BATHROOM FIXTURES.
9. PROVIDE FIRE BLOCKING FOR WALL CAVITIES THAT EXCEED CBC HEIGHT LIMITATION.
10. FIRE EXTINGUISHERS ARE TO BE LOCATED WITHIN THE 75 FOOT TRAVEL DISTANCE AND TO HAVE A MINIMUM RATING OF 2A:10BC. FIRE EXTINGUISHER LOCATIONS ARE TO BE FIELD VERIFIED BY THE FIRE DEPARTMENT INSPECTOR. (CCR T-19 SECTION 568).
11. INSTALL PLAINLY VISIBLE AND LEGIBLE SIGNS AT DOORS INTO ROOMS WITH ELECTICAL CONTROL PANELS STATING "ELECTRICAL ROOM." (CFC SECTION 605.3.1)
12. A RECESSED KNOX BOX IS TO BE INSTALLED ON THE BUILDING. THE LOCATION IS TO BE FIELD VERIFIED BY THE FIELD FIRE DEPARTMENT. (CFC SECTION 506.1)
13. ALL EQUIPMENT MUST BE A MINIMUM OF 2'-0" ABOVE ELEVATION 0'-0".
14. WET FLOODPROOFING PROVIDED AT 01-GROUND FLOOR, 0'-0". FOR EVERY SQUARE FOOT OF FLOOR AREA AT THE GOUND LEVEL, ONE SQUARE INCH OF WALL OPENING MUST BE PROVIDED. SEE WET FLOOR PROOFING CALCS ON T-1.2, CODE ANALYSIS.

KEYNOTES

04 22 00.B	CMU WALL. COLOR B. REFER TO STRUCTURAL.
05 12 00.B	STEEL COLUMN PER STRUCTURAL.
05 50 00.B	STEEL GUARDRAIL W/ HANDRAIL. PAINTED.
05 50 00.C	STEEL HANDRAIL, PAINTED.
05 51 00.A	ACCESS LADDER.
05 51 00.B	STEEL STAIRS.
08 33 23.A	OVERHEAD COILING DOOR. REFER TO DOOR SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
10 28 00.A	SURFACE MOUNTED TOWEL DISPENSER/WASTE RECEPTACLE.
10 28 00.C	SURFACE MOUNTED TOILET TISSUE DISPENSER.
10 28 00.E	SOAP DISPENSER.
10 28 00.F	SHOWER BENCH.
10 28 00.I	GRAB BAR.
10 28 00.K	SURFACE MOUNTED SEAT COVER DISPENSER.
10 44 00.A	FIRE EXTINGUISHER IN SURFACE MOUNTED FIRE EXTINGUISHER CABINET
10 51 00.A	METAL LOCKERS W/ TOP SHELF, WALL MOUNTED.
22 00 00.A	PLUMBING FIXTURE. REFER TO PLUMBING.
22 00 00.B	ELECTRIC WATER HEATER. REFER TO PLUMBING.
22 00 00.D	FLOOR DRAIN. SLOPE FLOOR TO DRAIN . MIN 1/8" PER 1'-0". REFER TO PLUMBING.
22 00 00.M	HOSE BIB. REFER TO PLUMBING.
22 00 00.N	AIR COMPRESSOR CONNECTION. REFER TO PLUMBING.
22 00 00.O	AIR COMPRESSOR. REFER TO PLUMBING.
26 00 00.A	ELECTRICAL EQUIPMENT. REFER TO ELECTRICAL.

LEGEND

- 12" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL W/ EXTERIOR RIBBED METAL PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS AND INTERIOR FURRING, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL FURRING

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CITY OF EL SEGUNDO
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EL SEGUNDO LS
GROUND FLOOR PLAN

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SHEET 14 OF 68

JOB NO. 1109531

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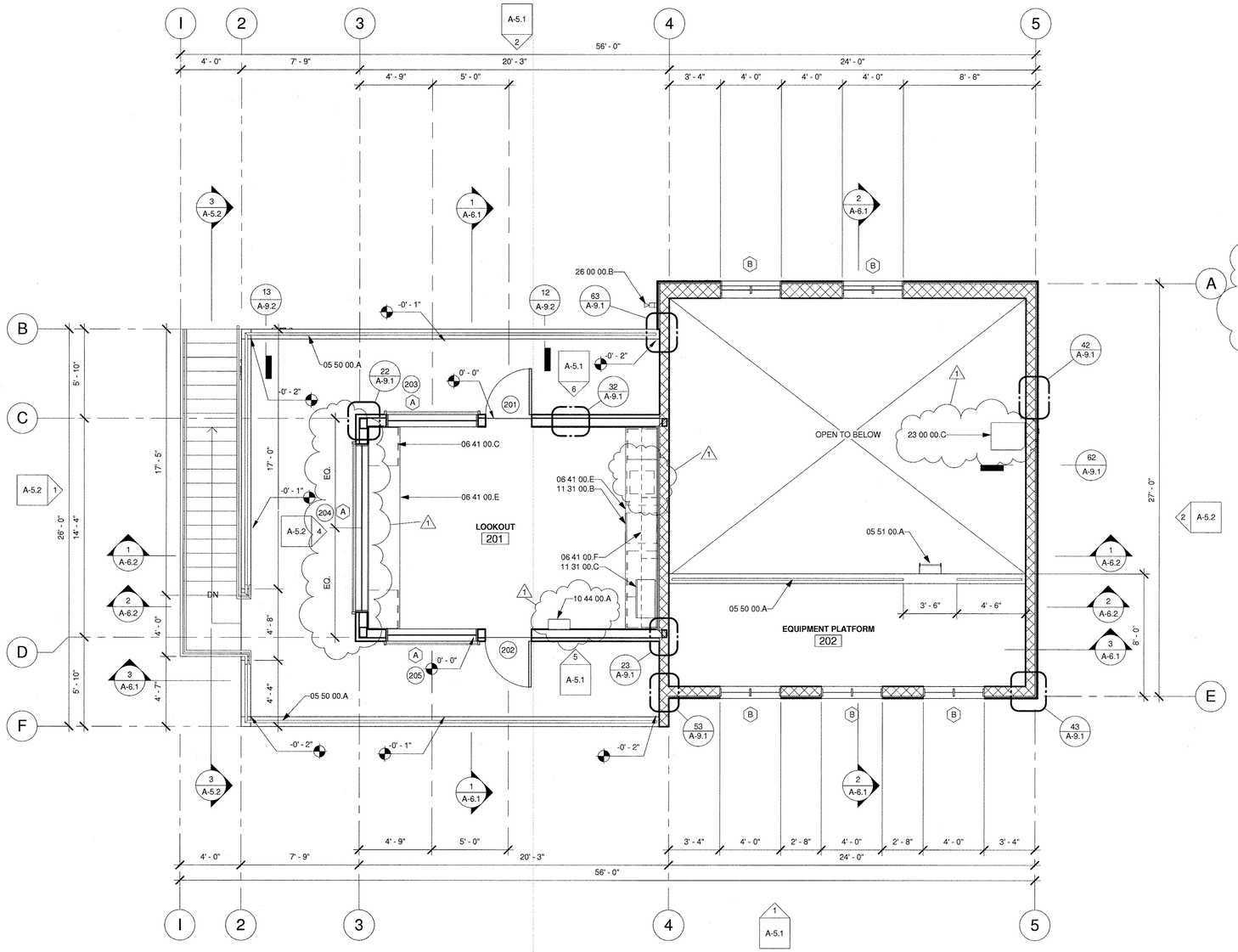

1 SECOND FLOOR PLAN

A3 | A-2.2 | 1/4" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION.
2. REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION.
3. REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION.
4. REFER TO PLUMBING PLANS FOR FURTHER INFORMATION.
5. ALL FURNITURE AND EQUIPMENT IS BY OWNER AND IS SHOWN FOR COORDINATION PURPOSES ONLY.
6. REFER TO FINISH PLAN AND SCHEDULE FOR INTERIOR WALL, CEILING AND FLOOR FINISH INFORMATION.
7. DIMENSIONS ARE TO FACE OF FRAMING UNLESS SPECIFICALLY NOTED OTHERWISE.
8. PROVIDE ADEQUATE BLOCKING IN WALLS FOR CABINETS AND OTHER WALL MOUNTED ACCESSORIES INCLUDING BUT NOT LIMITED TO HANDRAILS, SHELVING AND BATHROOM FIXTURES.
9. PROVIDE FIRE BLOCKING FOR WALL CAVITIES THAT EXCEED CBC HEIGHT LIMITATION.
10. FIRE EXTINGUISHERS ARE TO BE LOCATED WITHIN THE 75 FOOT TRAVEL DISTANCE AND TO HAVE A MINIMUM RATING OF 2A:10BC. FIRE EXTINGUISHER LOCATIONS ARE TO BE FIELD VERIFIED BY THE FIRE DEPARTMENT INSPECTOR. (CCR T-19 SECTION 568).
11. INSTALL PLAINLY VISIBLE AND LEGIBLE SIGNS AT DOORS INTO ROOMS WITH ELECTICAL CONTROL PANELS STATING "ELECTRICAL ROOM." (CFC SECTION 605.3.1)
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13. ALL EQUIPMENT MUST BE A MINIMUM OF 2'-0" ABOVE ELEVATION 0'-0".
14. WET FLOODPROOFING PROVIDED AT 01-GROUND FLOOR, 0'-0". FOR EVERY SQUARE FOOT OF FLOOR AREA AT THE GOUND LEVEL, ONE SQUARE INCH OF WALL OPENING MUST BE PROVIDED. SEE WET FLOOR PROOFING CALCS ON T-1.2, CODE ANALYSIS.

KEYNOTES

05 50 00.A	STEEL GUARDRAIL. PAINTED.
05 51 00.A	ACCESS LADDER.
06 41 00.C	BASE CABS W/ DRAWERS, DOORS & PULL OUT SHELVING.
06 41 00.E	COUNTERTOP WITH BACKSPLASH.
06 41 00.F	UPPER CABINET WITH EXPOSED ADJUSTABLE SHELVING.
10 44 00.A	FIRE EXTINGUISHER IN SURFACE MOUNTED FIRE EXTINGUISHER CABINET
11 31 00.B	UNDER CABINET REFRIGERATOR. OWNER FURNISHED AND INSTALLED.
11 31 00.C	MICROWAVE. OWNER FURNISHED AND INSTALLED.
23 00 00.C	WALL-MOUNTED HEATER. REFER TO MECHANICAL.
26 00 00.B	SECURITY CAMERA PROVIDED BY OWNER. CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.

LEGEND

- 12" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL W/ EXTERIOR RIBBED METAL PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS AND INTERIOR FURRING, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL FURRING

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SECOND FLOOR PLAN

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SHEET 15 OF 68
JOB NO. 1109531

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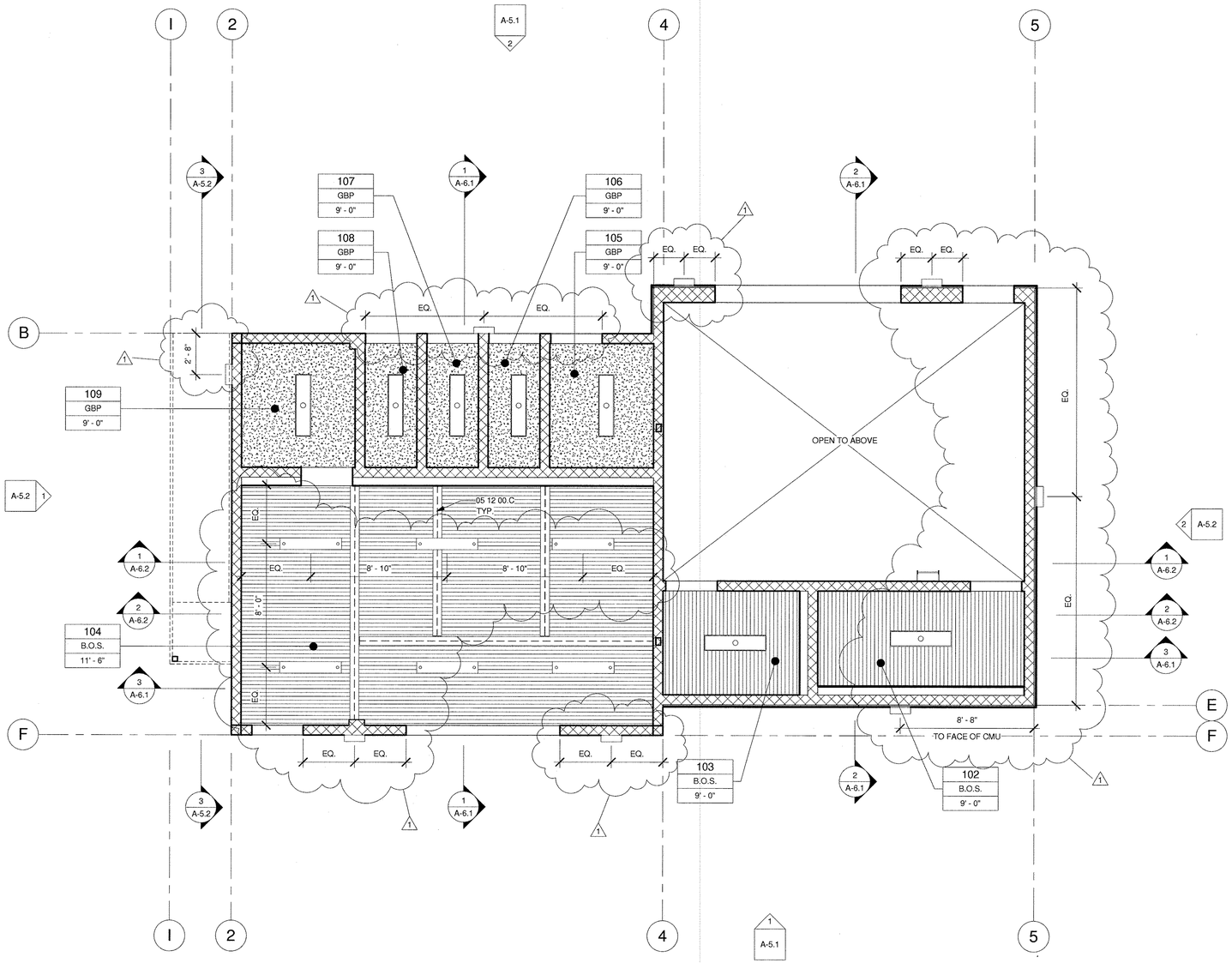

1 GROUND FLOOR RCP

A3 | A-3.1 1/4" = 1'-0"

GENERAL NOTES

1. BORDERS AT LAY-IN ACOUSTICAL CEILING PANELS SHALL BE CUT TO MATCH FACTORY EDGE PROFILE. NO EXPOSED FASTENERS SHALL BE PERMITTED INCLUDING POP RIVETS AND TAPPETS.
2. HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB TO FINISH FACE OF GWB OR FACE OF CEILING GRID AS INDICATED ON THE REFLECTED CEILING PLAN, UON.
3. ALL LIGHT FIXTURES ARE TO BE INSTALLED ACCORDING TO THE ARCHITECTURAL REFLECTED CEILING PLAN. ARCHITECT TO REVIEW CEILING LAYOUT INCLUDING BULKHEADS AND GRID PRIOR TO INSTALLATION.
4. LIGHT FIXTURE TYPES, QUANTITIES AND LOCATIONS ONLY ARE NOTED ON ARCHITECTURAL REFLECTED CEILING PLANS. SPECIFICATIONS, SWITCHING, EXIT LIGHTS, EMERGENCY LIGHTING, LIFE SAFETY EQUIPMENT, AND CIRCUITING ARE NOTED ON ENGINEERING DOCUMENTS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL ARCHITECTURAL AND ENGINEERING DRAWINGS.
5. DIMENSIONED LIGHT FIXTURES ARE FROM FINISHED FACE OF PARTITIONS TO CENTERLINE OF FIXTURE AND FROM CENTERLINE OF FIXTURE TO CENTERLINE OF FIXTURE. ALL FIXTURES SHALL BE INSTALLED IN CENTER OF CEILING TILE UNLESS NOTED OTHERWISE. ANY DISCREPANCIES WITH LIGHT FIXTURES, SWITCHES, THERMOSTATS, OR DIFFUSERS AS TO LOCATION BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS OR BETWEEN THE DRAWINGS AND EXISTING FIELD CONDITIONS SHALL BE CLARIFIED WITH THE ARCHITECT BEFORE PROCEEDING WITH INSTALLATION.

KEYNOTES

05 12 00.C STEEL BEAM PER STRUCTURAL.

ABBREVIATIONS

BASE
CTB BULLNOSED CERAMIC TILE BASE

CEILING
B.O.S. BOTTOM OF STRUCTURE, PAINT FINISH
GBP GYPSUM BOARD, PAINT FINISH

FLOORS
CT CERAMIC TILE
PCON POLISHED CONCRETE
PLY PLYWOOD
SCON SEALED CONCRETE

WAINSCOT
CTW CERAMIC TILE WAINSCOT

WALLS
CMU CEMENT MASONRY UNITS
GBP GYPSUM BOARD, PAINT FINISH

LEGEND

- 101 / 00 00 00.000 / 0' - 0" — ROOM NUMBER / MATERIAL / CEILING HEIGHT
- GYPSUM BOARD
- EXPOSED METAL DECK, REFER TO STRUCTURAL PLANS FOR ORIENTATION
- PENDANT MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- CEILING MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- WALL MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS (WALL)
- STRUCTURAL BEAM, REFER TO STRUCTURAL PLANS
- STRUCTURAL FRAMING, REFER TO STRUCTURAL PLANS

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SHEET 17 OF 68

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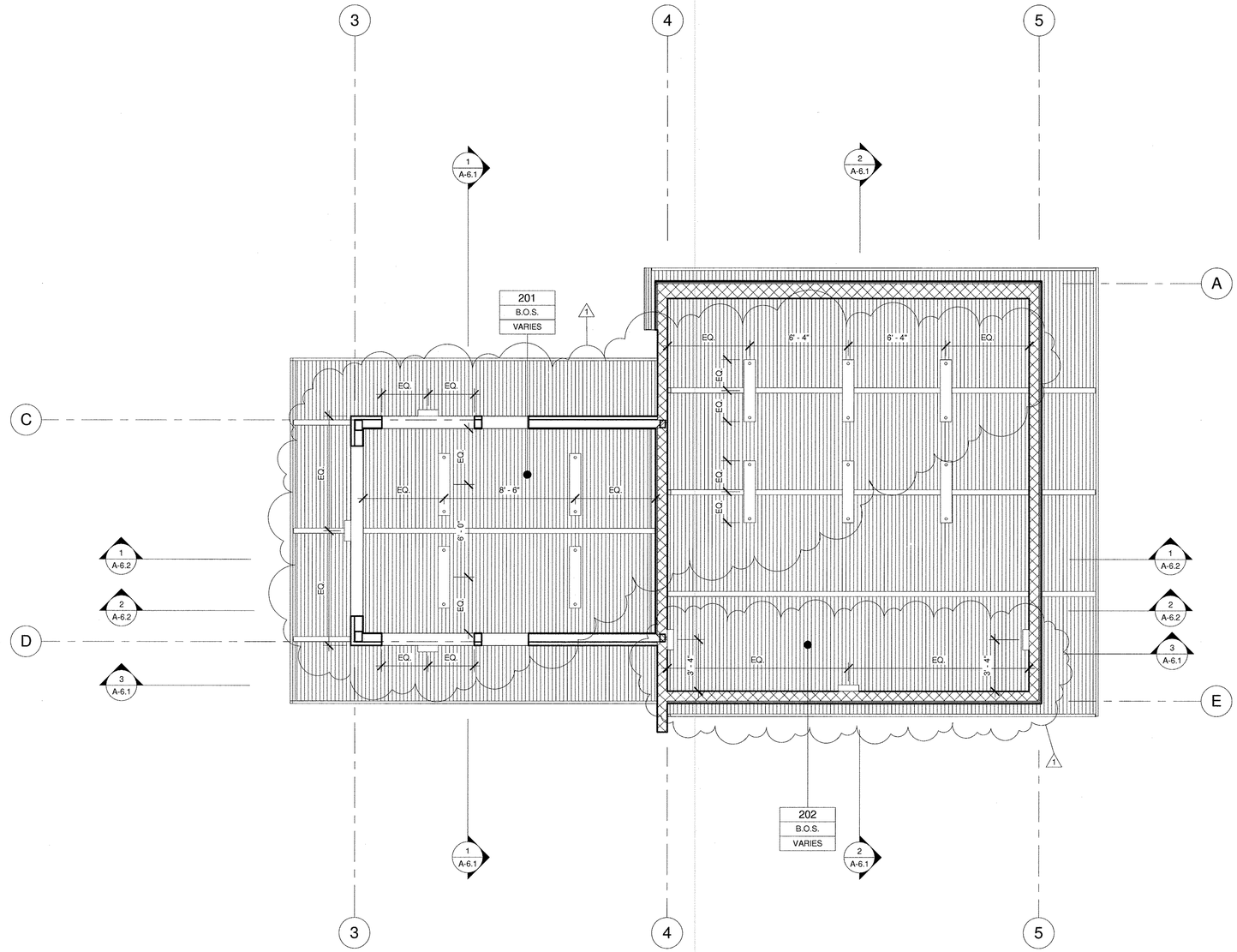

1 SECOND FLOOR RCP

A3 | A-3.2 | 1/4" = 1'-0"

GENERAL NOTES

1. BORDERS AT LAY-IN ACOUSTICAL CEILING PANELS SHALL BE CUT TO MATCH FACTORY EDGE PROFILE. NO EXPOSED FASTENERS SHALL BE PERMITTED INCLUDING POP RIVETS AND TAPPETS.
2. HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB TO FINISH FACE OF GWB OR FACE OF CEILING GRID AS INDICATED ON THE REFLECTED CEILING PLAN, UON.
3. ALL LIGHT FIXTURES ARE TO BE INSTALLED ACCORDING TO THE ARCHITECTURAL REFLECTED CEILING PLAN. ARCHITECT TO REVIEW CEILING LAYOUT INCLUDING BULKHEADS AND GRID PRIOR TO INSTALLATION.
4. LIGHT FIXTURE TYPES, QUANTITIES AND LOCATIONS ONLY ARE NOTED ON ARCHITECTURAL REFLECTED CEILING PLANS. SPECIFICATIONS, SWITCHING, EXIT LIGHTS, EMERGENCY LIGHTING, LIFE SAFETY EQUIPMENT, AND CIRCUITING ARE NOTED ON ENGINEERING DOCUMENTS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL ARCHITECTURAL AND ENGINEERING DRAWINGS.
5. DIMENSIONED LIGHT FIXTURES ARE FROM FINISHED FACE OF PARTITIONS TO CENTERLINE OF FIXTURE AND FROM CENTERLINE OF FIXTURE TO CENTERLINE OF FIXTURE. ALL FIXTURES SHALL BE INSTALLED IN CENTER OF CEILING TILE UNLESS NOTED OTHERWISE. ANY DISCREPANCIES WITH LIGHT FIXTURES, SWITCHES, THERMOSTATS, OR DIFFUSERS AS TO LOCATION BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS OR BETWEEN THE DRAWINGS AND EXISTING FIELD CONDITIONS SHALL BE CLARIFIED WITH THE ARCHITECT BEFORE PROCEEDING WITH INSTALLATION.

KEYNOTES

ABBREVIATIONS

BASE	
CTB	BULLNOSED CERAMIC TILE BASE
CEILING	
B.O.S.	BOTTOM OF STRUCTURE, PAINT FINISH
GBP	GYPSUM BOARD, PAINT FINISH
FLOORS	
CT	CERAMIC TILE
PCON	POLISHED CONCRETE
PLY	PLYWOOD
SCON	SEALED CONCRETE
WAINSCOT	
CTW	CERAMIC TILE WAINSCOT
WALLS	
CMU	CEMENT MASONRY UNITS
GBP	GYPSUM BOARD, PAINT FINISH

LEGEND

- 101 / 00 00 00.000 / 0' - 0" — ROOM NUMBER / MATERIAL / CEILING HEIGHT
- GYPSUM BOARD
- EXPOSED METAL DECK, REFER TO STRUCTURAL PLANS FOR ORIENTATION
- PENDANT MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- CEILING MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- WALL MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS (WALL)
- STRUCTURAL BEAM, REFER TO STRUCTURAL PLANS
- STRUCTURAL FRAMING, REFER TO STRUCTURAL PLANS

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SHEET 18 OF 71

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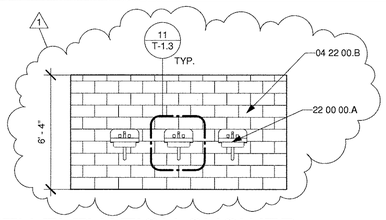
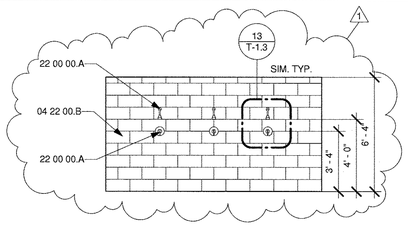


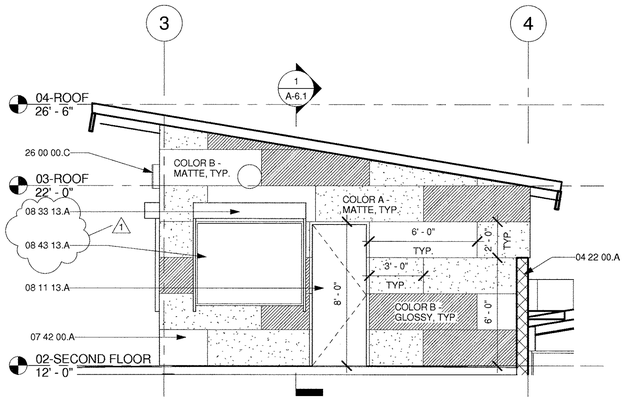
3 SOUTH ELEVATION-SHOWER

A-2.1 | A-5.1 1/4" = 1'-0"



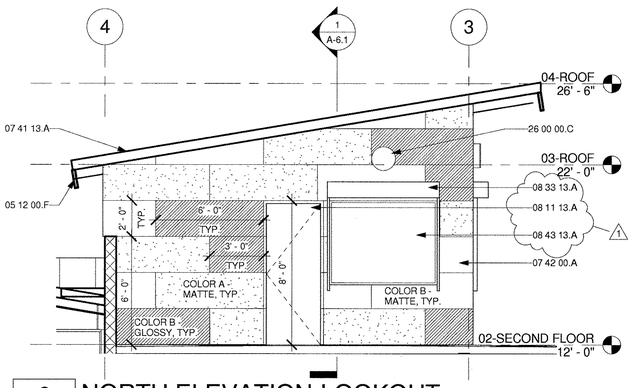
4 NORTH ELEVATION-SHOWER

A-2.1 | A-5.1 1/4" = 1'-0"



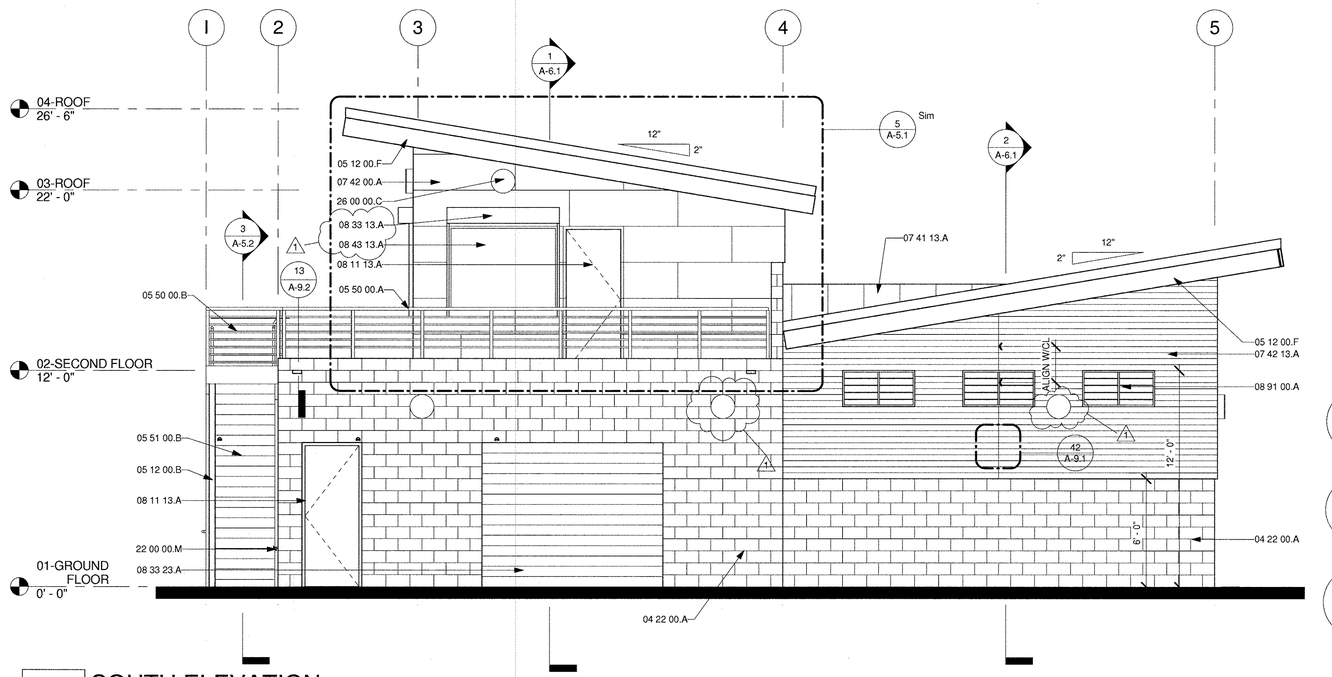
5 SOUTH ELEVATION-LOOKOUT

A-2.2 | A-5.1 1/4" = 1'-0"



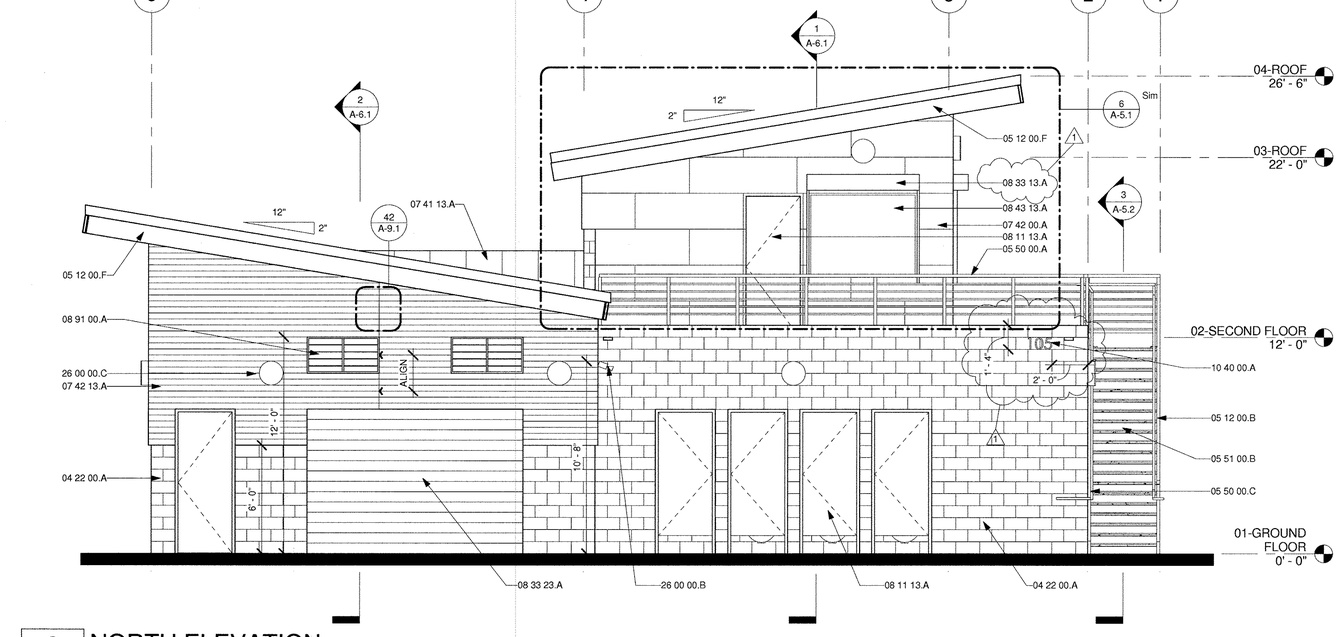
6 NORTH ELEVATION-LOOKOUT

A-2.2 | A-5.1 1/4" = 1'-0"



1 SOUTH ELEVATION

A-1.1 | A-5.1 1/4" = 1'-0"



2 NORTH ELEVATION

A-1.1 | A-5.1 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

04 22 00.A	CMU WALL. COLOR A. REFER TO STRUCTURAL.
04 22 00.B	CMU WALL. COLOR B. REFER TO STRUCTURAL.
05 12 00.B	STEEL COLUMN PER STRUCTURAL.
05 12 00.F	STEEL FRAMING PER STRUCTURAL.
05 50 00.A	STEEL GUARDRAIL. PAINTED.
05 50 00.B	STEEL GUARDRAIL W/ HANDRAIL. PAINTED.
05 50 00.C	STEEL HANDRAIL, PAINTED.
05 51 00.B	STEEL STAIRS.
07 41 13.A	STANDING SEAM METAL ROOF PANEL.
07 42 00.A	SOLID PHENOLIC WALL PANELS. RUNNING BOND PATTERN TYP. ALL. ALIGN PANELS HORIZONTALLY.
07 42 13.A	HORIZONTAL METAL PANELS.
08 11 13.A	HOLLOW METAL DOOR & FRAME. REFER DOOR SCHEDULE
08 33 13.A	OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
08 33 23.A	OVERHEAD COILING DOOR. REFER TO DOOR SCHEDULE.
08 43 13.A	ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
10 40 00.A	BUILDING IDENTIFICATION NUMBERS
22 00 00.A	PLUMBING FIXTURE. REFER TO PLUMBING.
22 00 00.M	HOSE BIB. REFER TO PLUMBING.
26 00 00.B	SECURITY CAMERA PROVIDED BY OWNER. CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.
26 00 00.C	LIGHT FIXTURE. REFER TO ELECTRICAL.

LEGEND

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CITY OF EL SEGUNDO
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EXTERIOR ELEVATIONS

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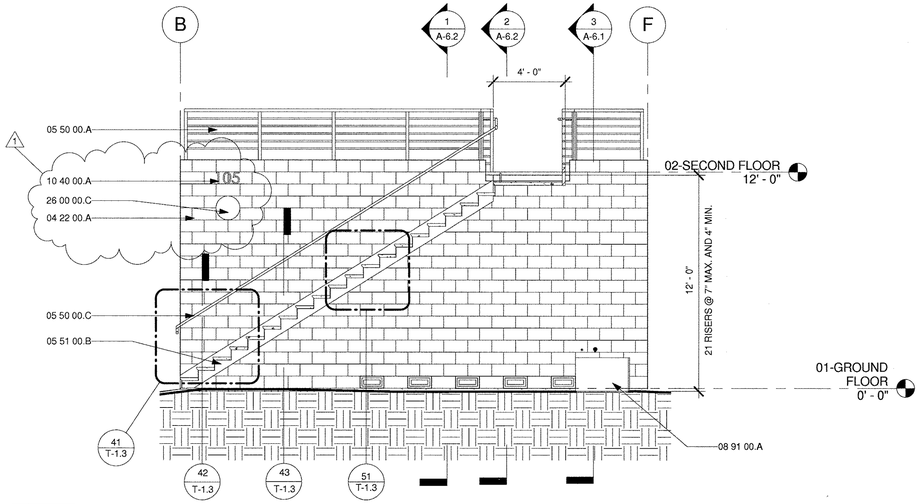
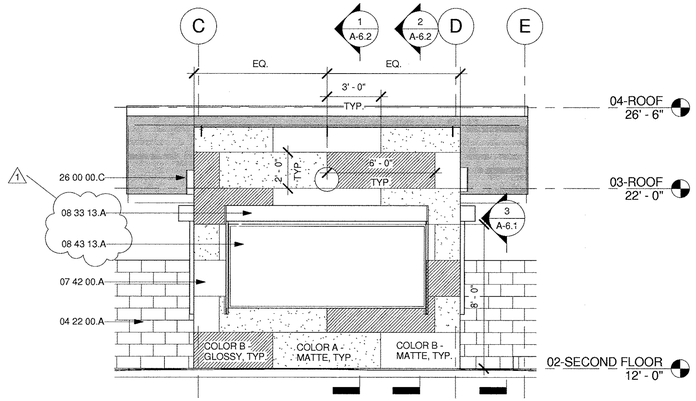


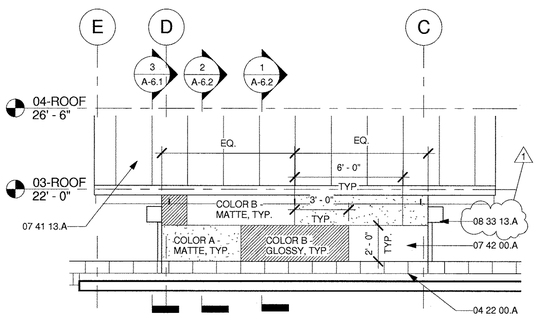
3 STAIR SECTION

A-2.1 | A-5.2 1/4" = 1'-0"



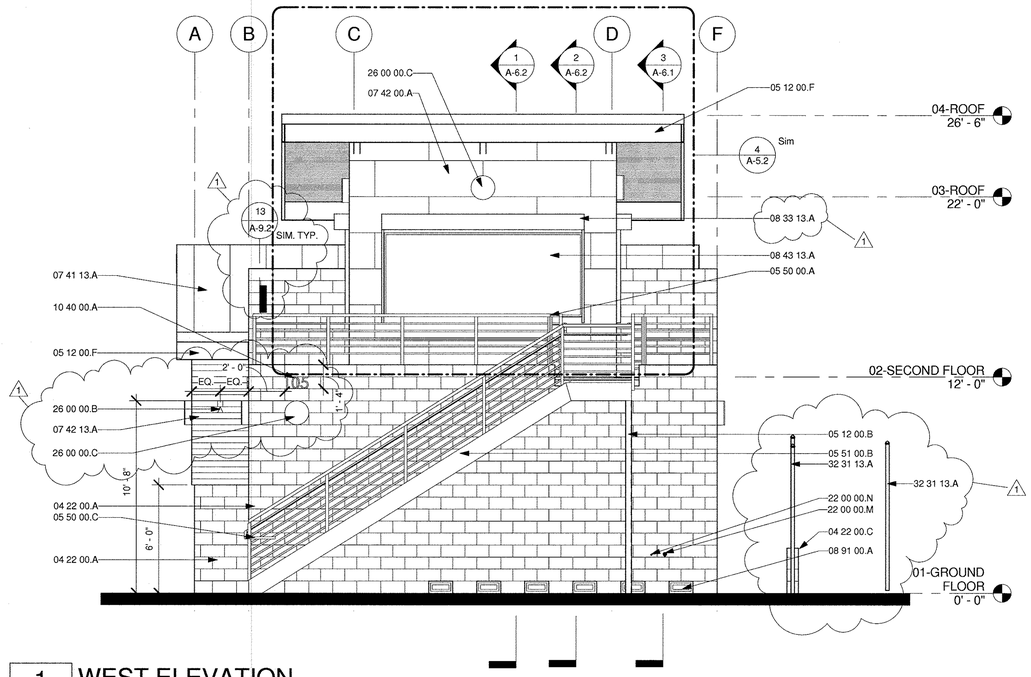
4 WEST ELEVATION-LOOKOUT

A-2.2 | A-5.2 1/4" = 1'-0"



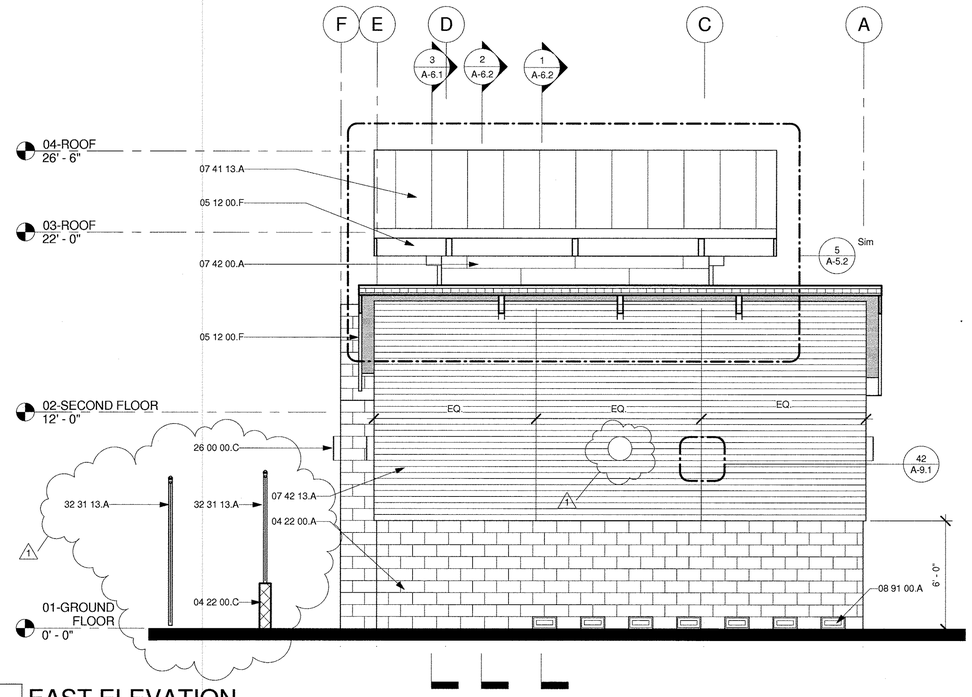
5 EAST ELEVATION-LOOKOUT

A-2.3 | A-5.2 1/4" = 1'-0"



1 WEST ELEVATION

A-2.1 | A-5.2 1/4" = 1'-0"



2 EAST ELEVATION

A-2.1 | A-5.2 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

04 22 00.A	CMU WALL. COLOR A. REFER TO STRUCTURAL.
04 22 00.C	CMU RETAINING WALL. COLOR B. REFER TO CIVIL AND STRUCTURAL.
05 12 00.B	STEEL COLUMN PER STRUCTURAL.
05 12 00.F	STEEL FRAMING PER STRUCTURAL.
05 50 00.A	STEEL GUARDRAIL. PAINTED.
05 50 00.C	STEEL HANDRAIL, PAINTED.
05 51 00.B	STEEL STAIRS.
07 41 13.A	STANDING SEAM METAL ROOF PANEL.
07 42 00.A	SOLID PHENOLIC WALL PANELS. RUNNING BOND PATTERN TYP. ALL. ALIGN PANELS HORIZONTALLY.
07 42 13.A	HORIZONTAL METAL PANELS.
08 33 13.A	OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
08 43 13.A	ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
10 40 00.A	BUILDING IDENTIFICATION NUMBERS
22 00 00.M	HOSE BIB. REFER TO PLUMBING.
22 00 00.N	AIR COMPRESSOR CONNECTION. REFER TO PLUMBING.
26 00 00.B	SECURITY CAMERA PROVIDED BY OWNER. CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.
26 00 00.C	LIGHT FIXTURE. REFER TO ELECTRICAL.
32 31 13.A	CHAIN LINK FENCE. REFER TO CIVIL.

LEGEND

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EXERIOR ELEVATIONS

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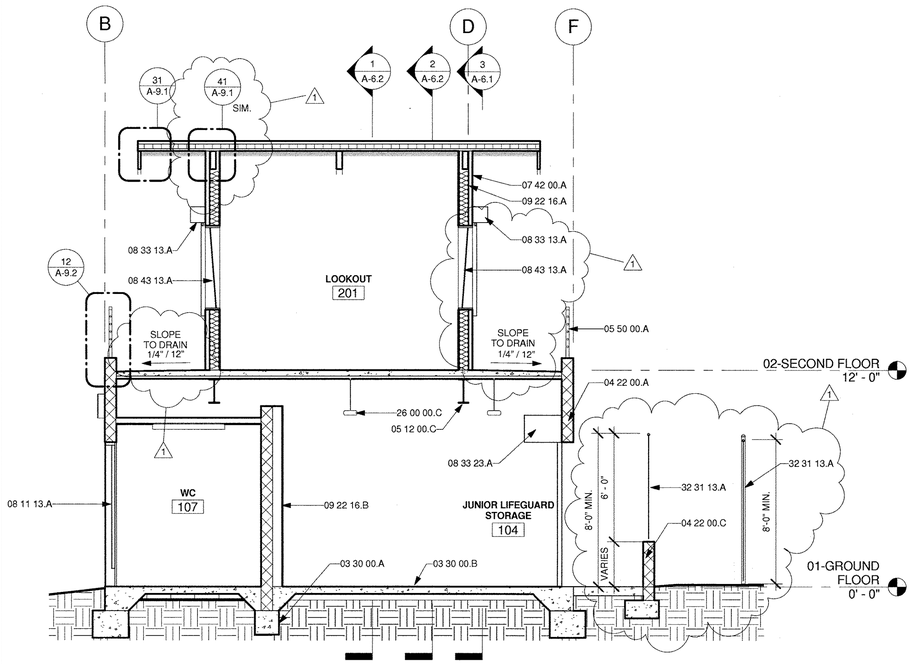
A-5.2
10/06/10

SHEET 21 OF 68

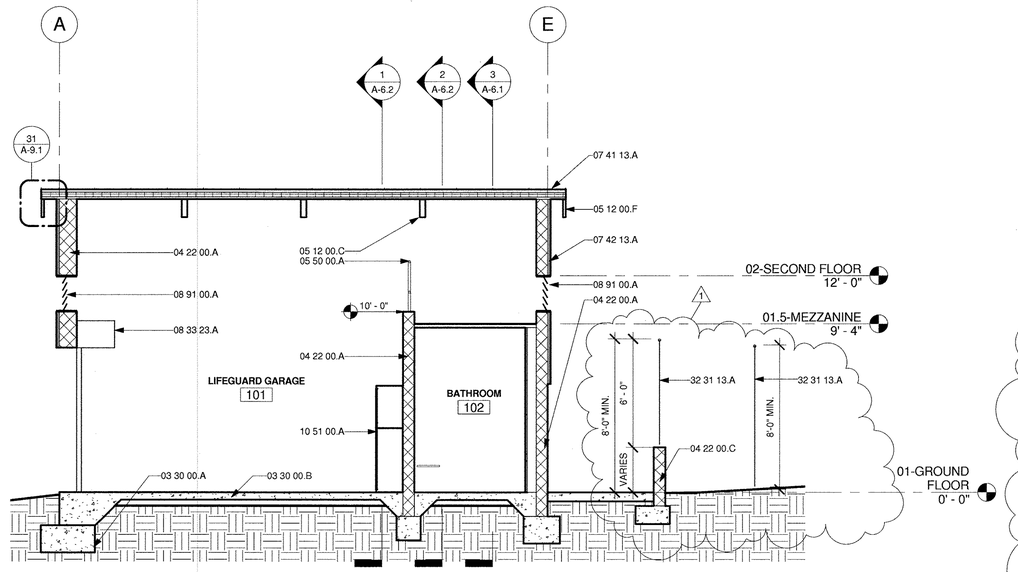
JOB NO. 1109531

FILE NO.



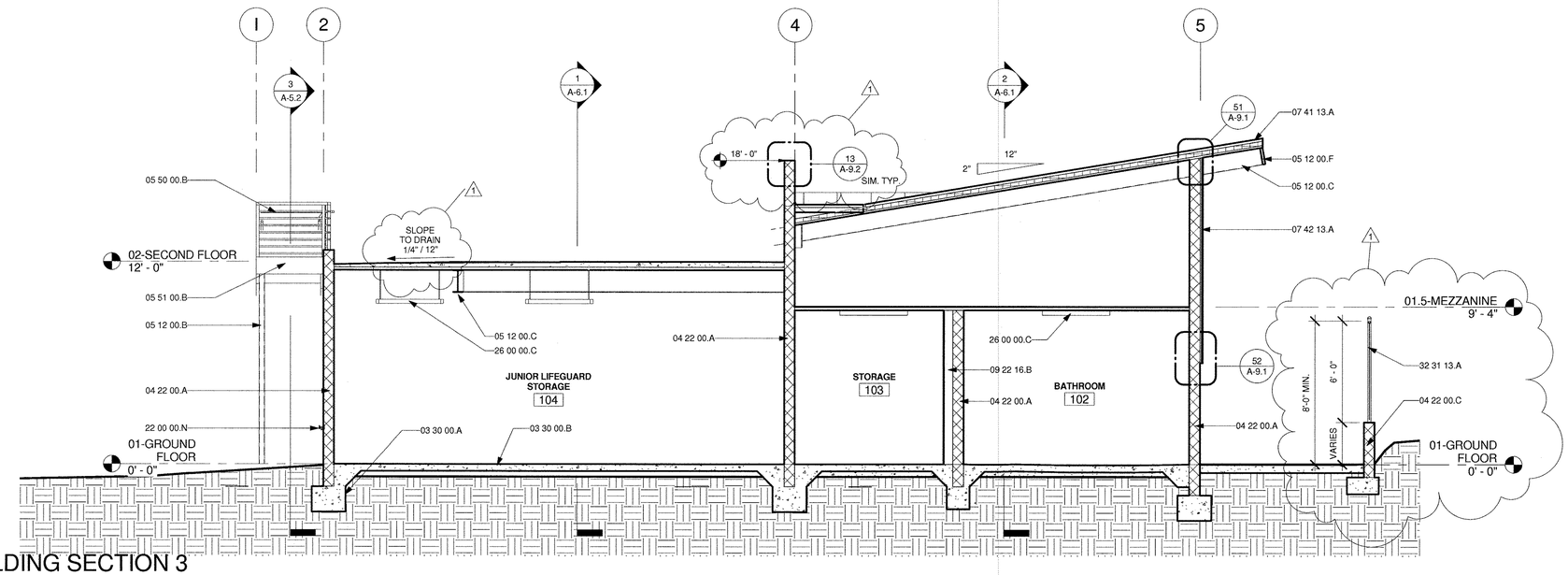
1 BUILDING SECTION 1

A-2.1 | A-6.1 1/4" = 1'-0"



2 BUILDING SECTION 2

A-2.1 | A-6.1 1/4" = 1'-0"



3 BUILDING SECTION 3

A-2.1 | A-6.1 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

03 30 00.A	CONCRETE FOOTING. REFER TO STRUCTURAL.
03 30 00.B	CONCRETE SLAB. REFER TO STRUCTURAL.
04 22 00.A	CMU WALL, COLOR A. REFER TO STRUCTURAL.
04 22 00.C	CMU RETAINING WALL, COLOR B. REFER TO CIVIL AND STRUCTURAL.
05 12 00.B	STEEL COLUMN PER STRUCTURAL.
05 12 00.C	STEEL BEAM PER STRUCTURAL.
05 12 00.F	STEEL FRAMING PER STRUCTURAL.
05 50 00.A	STEEL GUARDRAIL. PAINTED.
05 50 00.B	STEEL GUARDRAIL W/ HANDRAIL. PAINTED.
05 51 00.B	STEEL STAIRS.
07 41 13.A	STANDING SEAM METAL ROOF PANEL.
07 42 00.A	SOLID PHENOLIC WALL PANELS. RUNNING BOND PATTERN TYP. ALL. ALIGN PANELS HORIZONTALLY.
07 42 13.A	HORIZONTAL METAL PANELS.
08 11 13.A	HOLLOW METAL DOOR & FRAME. REFER DOOR SCHEDULE
08 33 13.A	OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
08 33 23.A	OVERHEAD COILING DOOR. REFER TO DOOR SCHEDULE.
08 43 13.A	ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
09 22 16.A	METAL STUD WALL FRAMING. REFER TO STRUCTURAL PLANS.
09 22 16.B	METAL STUD FURRING AT INTERIOR CMU WALL.
10 51 00.A	METAL LOCKERS W/ TOP SHELF, WALL MOUNTED.
22 00 00.N	AIR COMPRESSOR CONNECTION. REFER TO PLUMBING.
26 00 00.C	LIGHT FIXTURE. REFER TO ELECTRICAL.
32 31 13.A	CHAIN LINK FENCE. REFER TO CIVIL.

1

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CITY OF EL SEGUNDO
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EL SEGUNDO LS
BUILDING SECTIONS

PM ____ DATE ____
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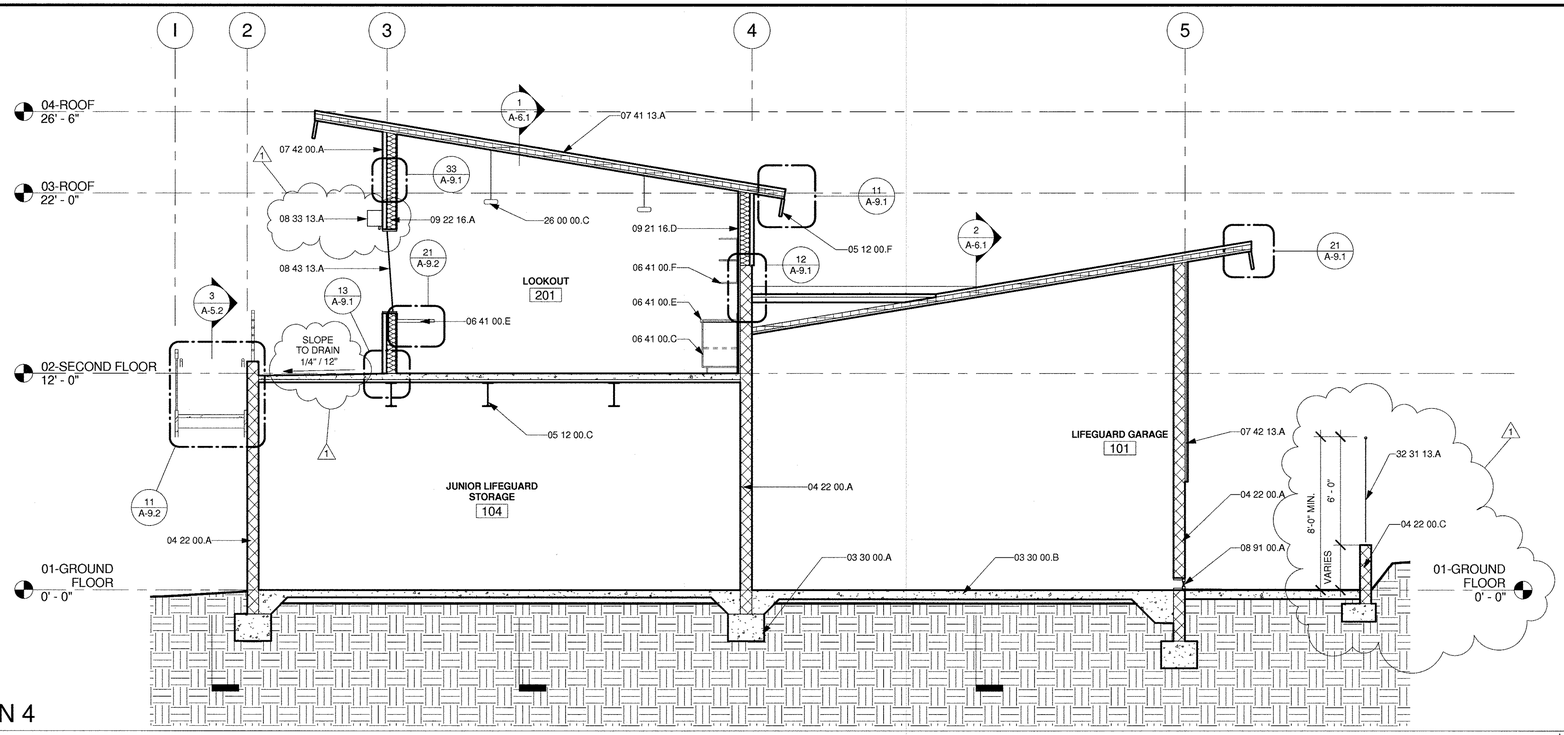
APPROVED DATE ____
CITY ENGINEER R.E. ____

A-6.1
10/06/10

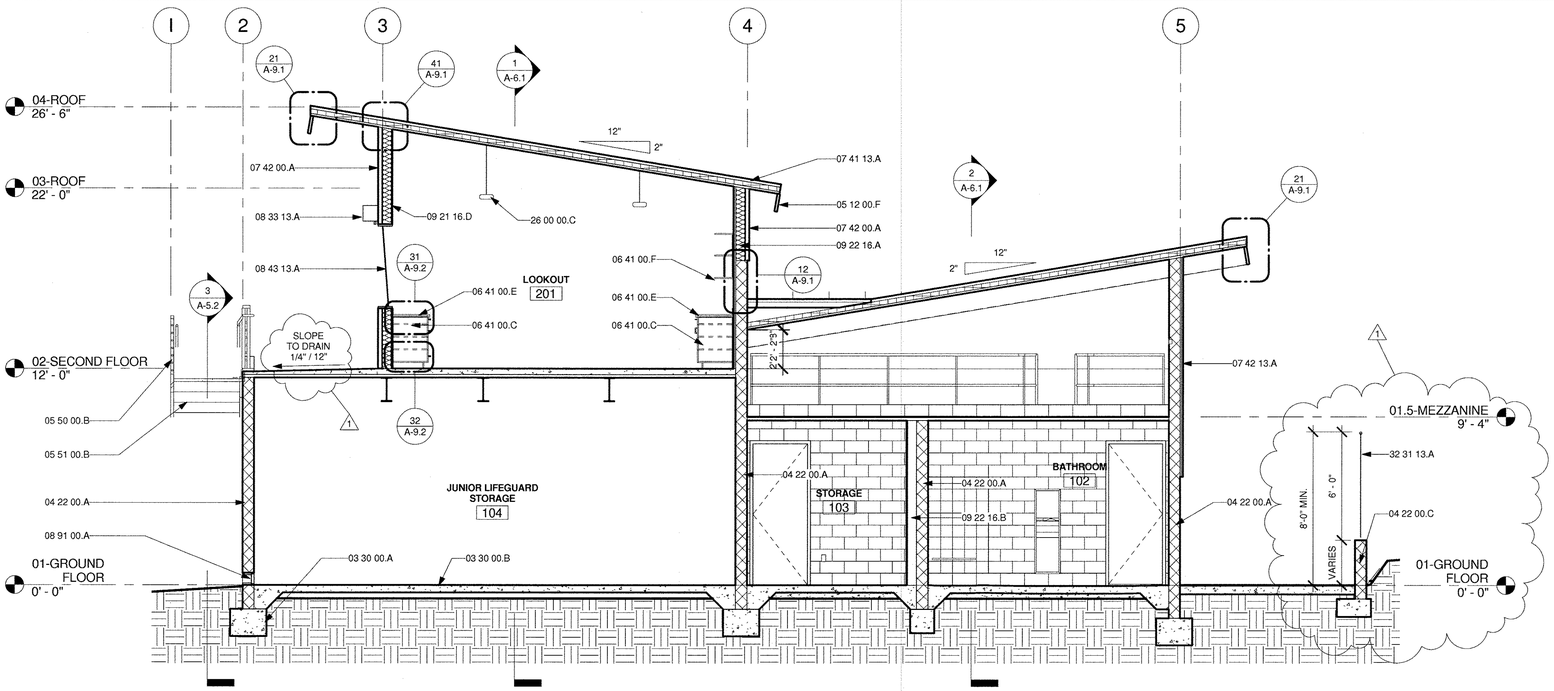
SHEET 22 OF 68
JOB NO. 1109531

FILE NO. ____



1 BUILDING SECTION 4

A-2.1 | A-6.2 1/4" = 1'-0"



2 BUILDING SECTION 5

A-2.1 | A-6.2 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

03 30 00.A	CONCRETE FOOTING. REFER TO STRUCTURAL.
03 30 00.B	CONCRETE SLAB. REFER TO STRUCTURAL.
04 22 00.A	CMU WALL. COLOR A. REFER TO STRUCTURAL.
04 22 00.C	CMU RETAINING WALL. COLOR B. REFER TO CIVIL AND STRUCTURAL.
05 12 00.C	STEEL BEAM PER STRUCTURAL.
05 12 00.F	STEEL FRAMING PER STRUCTURAL.
05 50 00.B	STEEL GUARDRAIL W/ HANDRAIL. PAINTED.
05 51 00.B	STEEL STAIRS.
06 41 00.C	BASE CABS W/ DRAWERS, DOORS & PULL OUT SHELVING.
06 41 00.E	COUNTERTOP WITH BACKSPLASH.
06 41 00.F	UPPER CABINET WITH EXPOSED ADJUSTABLE SHELVING.
07 41 13.A	STANDING SEAM METAL ROOF PANEL.
07 42 00.A	SOLID PHENOLIC WALL PANELS. RUNNING BOND PATTERN TYP. ALL. ALIGN PANELS HORIZONTALLY.
07 42 13.A	HORIZONTAL METAL PANELS.
08 33 13.A	OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
08 43 13.A	ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
09 21 16.D	GYPSUM BOARD WALL FINISH.
09 22 16.A	METAL STUD WALL FRAMING. REFER TO STRUCTURAL PLANS.
09 22 16.B	METAL STUD FURRING AT INTERIOR CMU WALL.
26 00 00.C	LIGHT FIXTURE. REFER TO ELECTRICAL.
32 31 13.A	CHAIN LINK FENCE. REFER TO CIVIL.

1

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APPROVED DATE ____
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A-6.2
10/06/10

SHEET 23 OF 68

JOB NO. 1109531

FILE NO. ____

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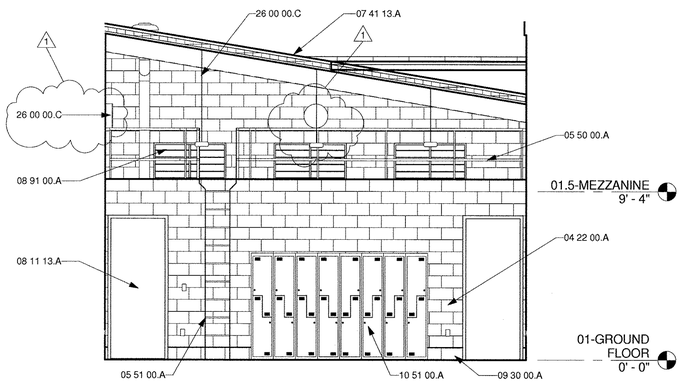
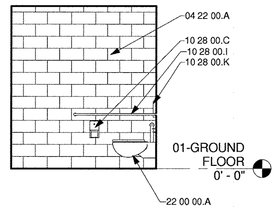
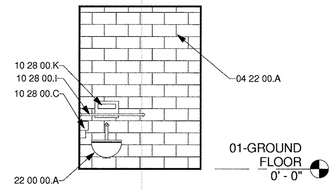


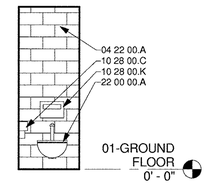
1 101-S
A-1.1 | A-7.1 1/4" = 1'-0"



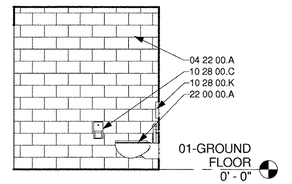
2 105-E
A-1.1 | A-7.1 1/4" = 1'-0"



3 105-S
A-1.1 | A-7.1 1/4" = 1'-0"



8 TYP. WC-S
A-1.1 | A-7.1 1/4" = 1'-0"

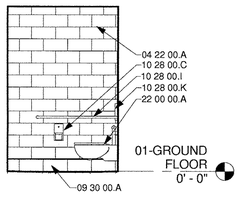


11 TYP. WC-E
A-1.1 | A-7.1 1/4" = 1'-0"

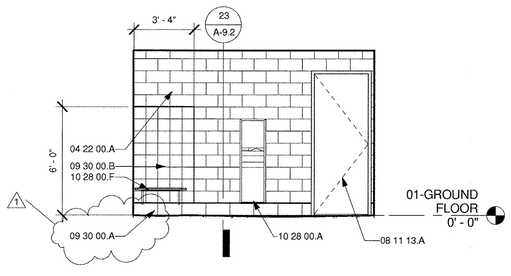
GENERAL NOTES

KEYNOTES

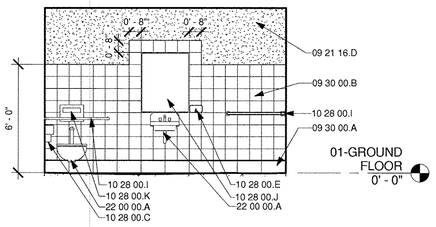
04 22 00.A	CMU WALL. COLOR A. REFER TO STRUCTURAL.
05 12 00.C	STEEL BEAM PER STRUCTURAL.
05 50 00.A	STEEL GUARDRAIL. PAINTED.
05 51 00.A	ACCESS LADDER.
06 41 00.C	BASE CABS W/ DRAWERS, DOORS & PULL OUT SHELVING.
06 41 00.E	COUNTERTOP WITH BACKSPLASH.
06 41 00.F	UPPER CABINET WITH EXPOSED ADJUSTABLE SHELVING.
07 41 13.A	STANDING SEAM METAL ROOF PANEL.
08 11 13.A	HOLLOW METAL DOOR & FRAME. REFER DOOR SCHEDULE
08 43 13.A	ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
09 21 16.D	GYPSUM BOARD WALL FINISH.
09 30 00.A	CERAMIC TILE WALL BASE.
09 30 00.B	CERAMIC TILE WAINSCOT.
10 28 00.A	SURFACE MOUNTED TOWEL DISPENSER/WASTE RECEPTACLE.
10 28 00.C	SURFACE MOUNTED TOILET TISSUE DISPENSER.
10 28 00.E	SOAP DISPENSER.
10 28 00.F	SHOWER BENCH.
10 28 00.I	GRAB BAR.
10 28 00.J	WALL MOUNTED MIRROR.
10 28 00.K	SURFACE MOUNTED SEAT COVER DISPENSER.
10 51 00.A	METAL LOCKERS W/ TOP SHELF, WALL MOUNTED.
11 31 00.B	UNDER CABINET REFRIGERATOR. OWNER FURNISHED AND INSTALLED.
11 31 00.C	MICROWAVE. OWNER FURNISHED AND INSTALLED.
22 00 00.A	PLUMBING FIXTURE. REFER TO PLUMBING.
26 00 00.C	LIGHT FIXTURE. REFER TO ELECTRICAL.



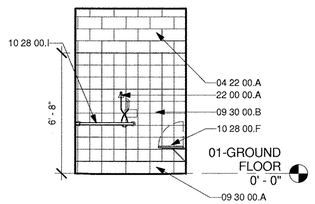
4 102-E
A-1.1 | A-7.1 1/4" = 1'-0"



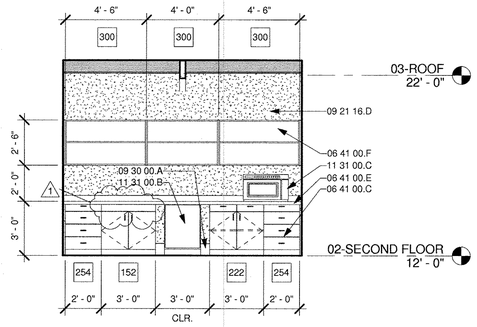
5 102-N
A-1.1 | A-7.1 1/4" = 1'-0"



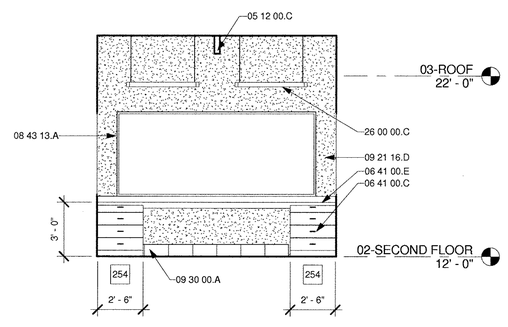
6 102-S
A-1.1 | A-7.1 1/4" = 1'-0"



7 102-W
A-1.1 | A-7.1 1/4" = 1'-0"



9 201-E
A-1.1 | A-7.1 1/4" = 1'-0"



10 201-W
A-1.1 | A-7.1 1/4" = 1'-0"

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A-7.1
10/06/10

SHEET 24 OF 68

JOB NO. 1109531

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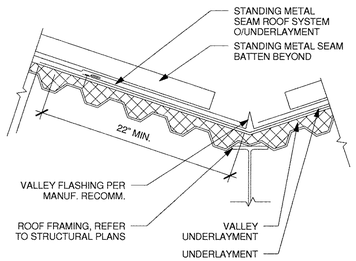
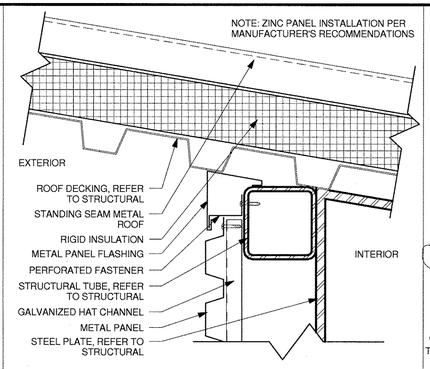
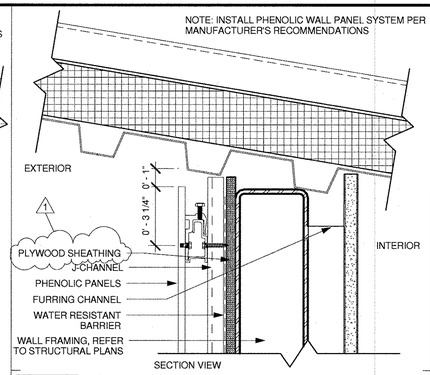


NOTE 1: DIMENSIONS & WATERPROOFING SAME BOTH SIDES OF VALLEY
NOTE 2: ATTACHMENT & COMPONETS OF STANDING SEAM METAL ROOF SYSTEM PER MANUFACTURER'S RECOMMENDATIONS

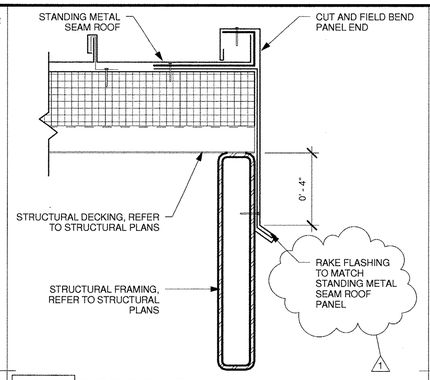
61 STANDING SEAM VALLEY
A-4.1 | A-9.1 1 1/2" = 1'-0"



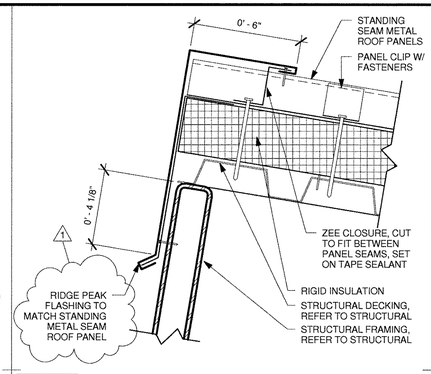
51 METAL PANEL-TOP TERMINATION
A-6.1 | A-9.1 3" = 1'-0"



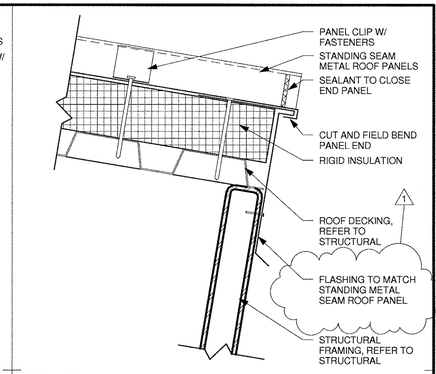
41 PHENOLIC PANEL-TOP OF WALL
A-6.1 | A-9.1 3" = 1'-0"



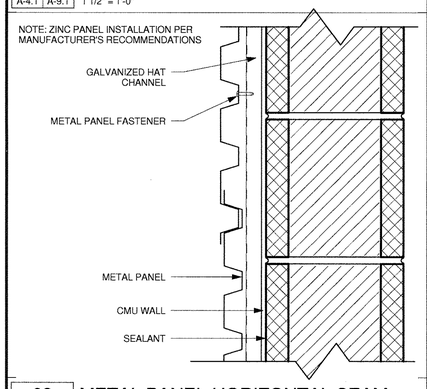
31 ROOF RAKE
A-4.1 | A-9.1 3" = 1'-0"



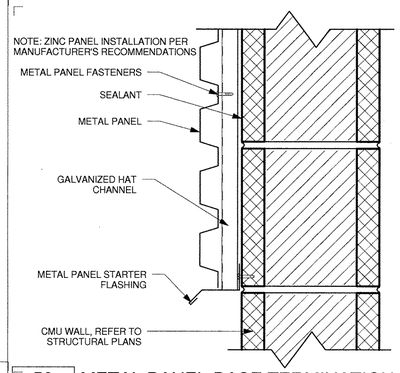
21 ROOF RIDGE
A-4.1 | A-9.1 3" = 1'-0"



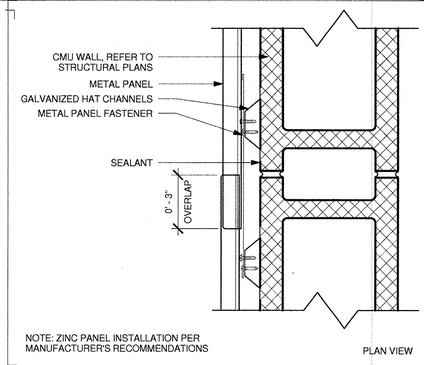
11 EAVE
A-4.1 | A-9.1 3" = 1'-0"



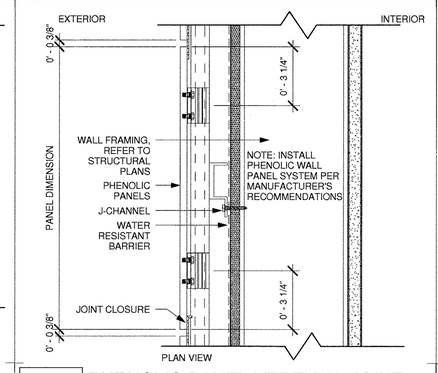
62 METAL PANEL-HORIZONTAL SEAM
A-2.2 | A-9.1 3" = 1'-0"



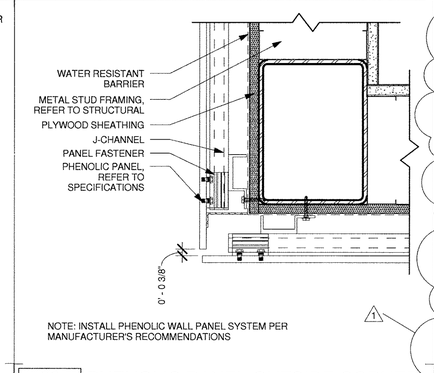
52 METAL PANEL-BASE TERMINATION
A-6.1 | A-9.1 3" = 1'-0"



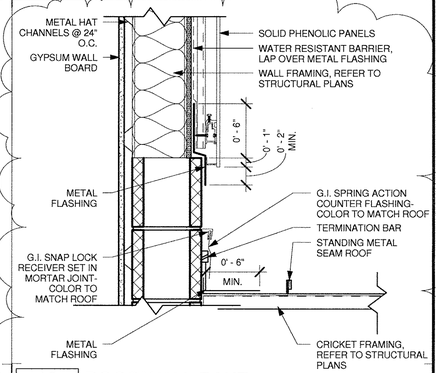
42 METAL PANEL-VERTICAL SEAM
A-2.2 | A-9.1 3" = 1'-0"



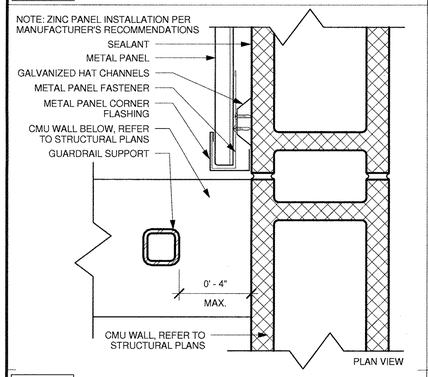
32 PHENOLIC PANEL-VERTICAL JOINT
A-2.2 | A-9.1 3" = 1'-0"



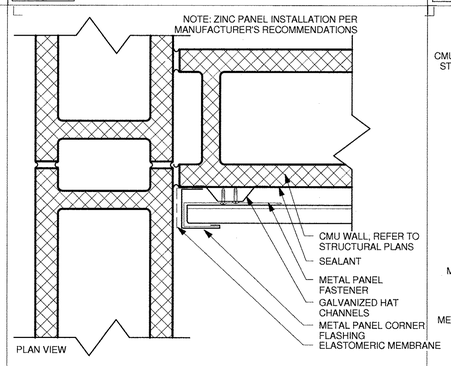
22 PHENOLIC PANEL-OUTSIDE CORNER
A-2.2 | A-9.1 3" = 1'-0"



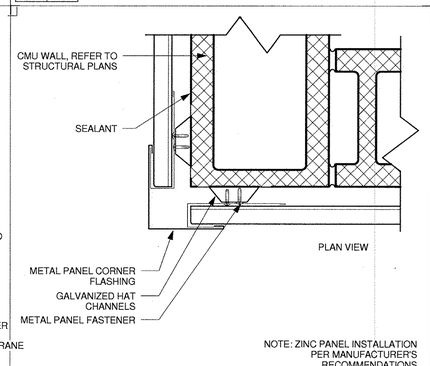
12 ROOF/WALL RAKE
A-4.1 | A-9.1 1 1/2" = 1'-0"



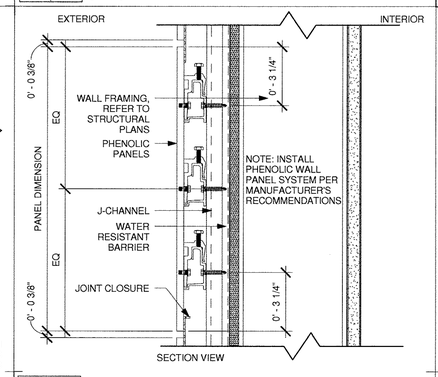
63 METAL PANEL-END TERMINATION
A-2.2 | A-9.1 3" = 1'-0"



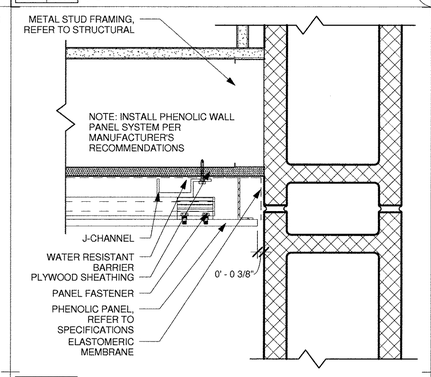
53 METAL PANEL-END TERMINATION
A-2.2 | A-9.1 3" = 1'-0"



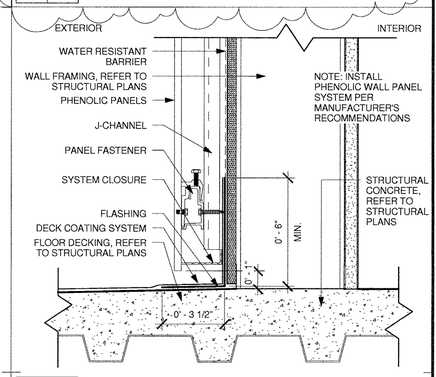
43 METAL PANEL-OUTSIDE CORNER
A-2.2 | A-9.1 3" = 1'-0"



33 PHENOLIC PANEL-HORIZONTAL JOINT
A-6.2 | A-9.1 3" = 1'-0"



23 PHENOLIC PANEL-END TERMINATION
A-2.2 | A-9.1 3" = 1'-0"



13 WALL @ CONC. DECK
A-6.2 | A-9.1 3" = 1'-0"

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CITY OF EL SEGUNDO
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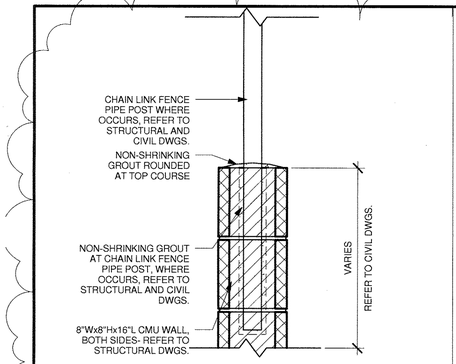
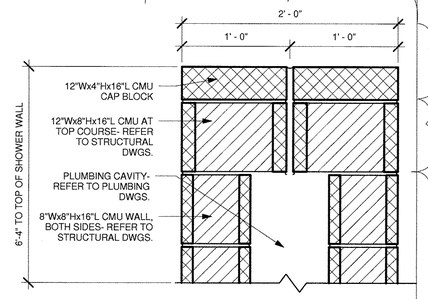
A-9.1
10/06/10
SHEET 26 OF 68
JOB NO. 1109531

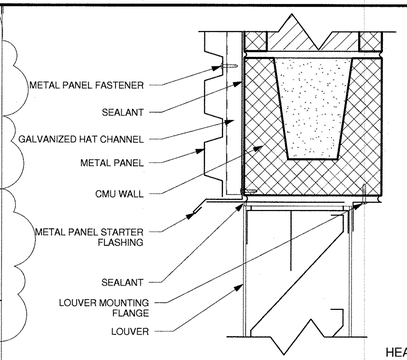
FILE NO. ____



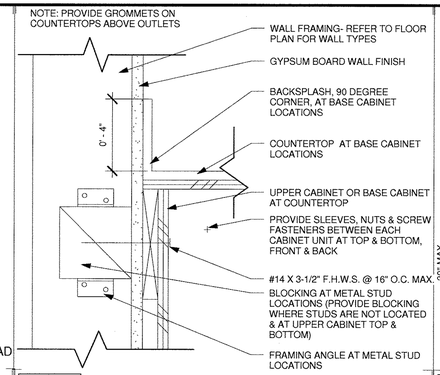
61 CMU RETAINING WALL CAP
A-1.1 | A-9.2 1 1/2" = 1'-0"



51 CMU SHOWER WALL CAP
A-2.1 | A-9.2 1 1/2" = 1'-0"

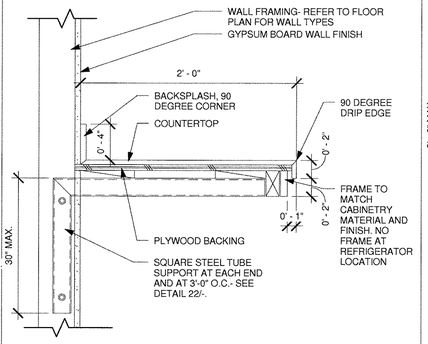


41 LOUVER HEAD
A-9.2 3" = 1'-0"

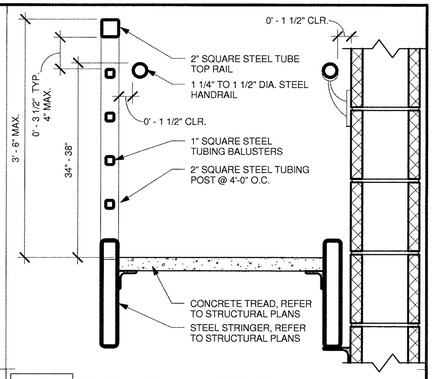


HEAD

31 BASE CAB. ANCHOR @ COUNTERTOP
A-6.2 | A-9.2 3" = 1'-0"

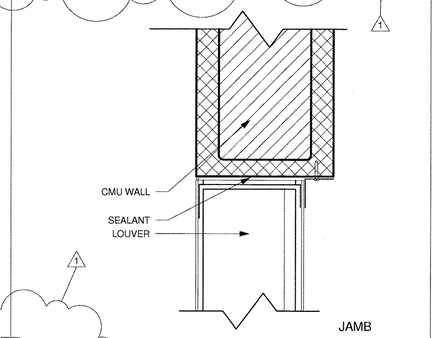


21 COUNTERTOP ANCHOR
A-6.2 | A-9.2 1 1/2" = 1'-0"



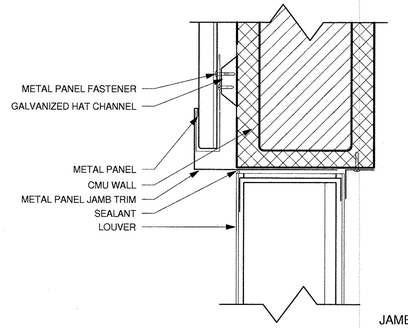
11 GUARDRAIL @ STAIR
A-6.2 | A-9.2 1 1/2" = 1'-0"

62 FLOOR DRAIN
A-2.1 | A-9.2 3" = 1'-0"



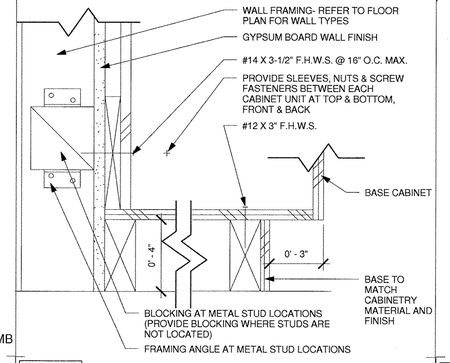
JAMB

52 LOUVER JAMB- FLOODPROOFING
A-9.2 3" = 1'-0"

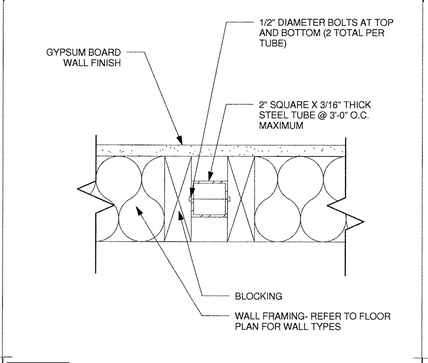


JAMB

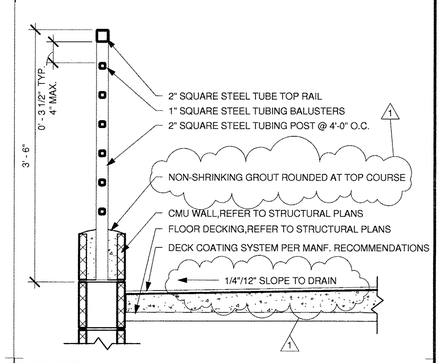
42 LOUVER JAMB
A-9.2 3" = 1'-0"



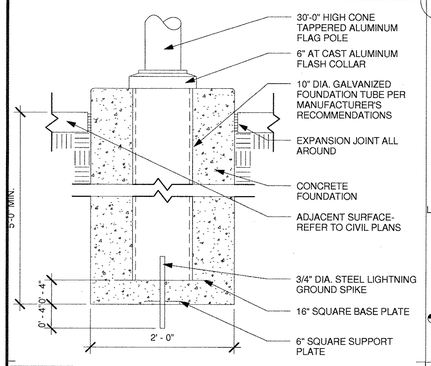
32 BASE CAB. ANCHOR @ BASE
A-6.2 | A-9.2 3" = 1'-0"



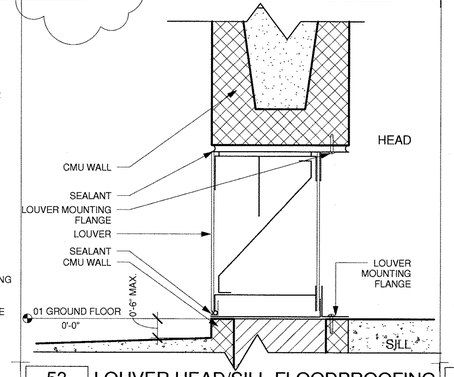
22 COUNTERTOP SUPPORT
A-9.2 3" = 1'-0"



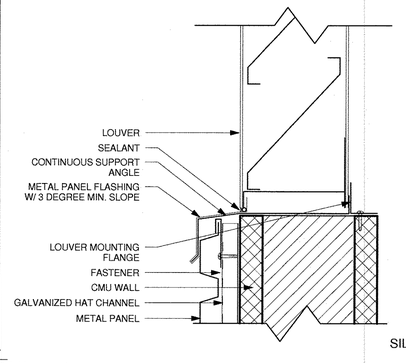
12 GUARDRAIL
A-2.2 | A-9.2 1" = 1'-0"



63 FLAG POLE BASE
A-1.1 | A-9.2 1" = 1'-0"

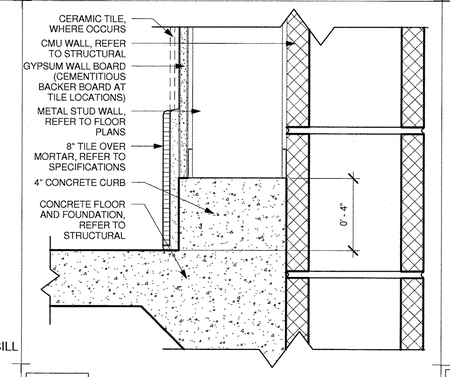


53 LOUVER HEAD/SILL-FLOODPROOFING
A-9.2 3" = 1'-0"

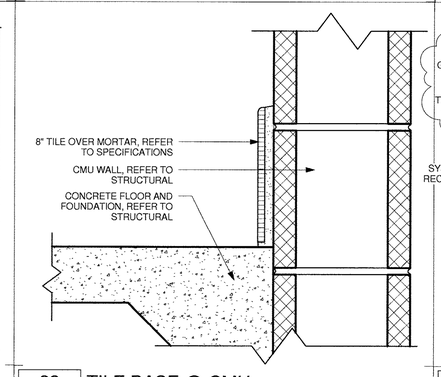


SILL

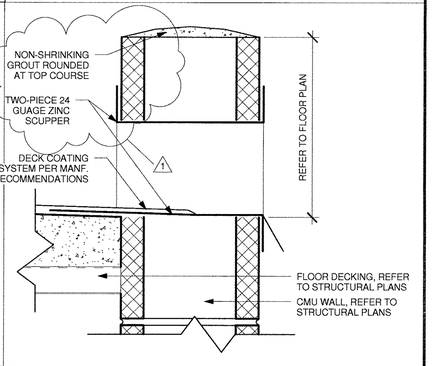
43 LOUVER SILL
A-9.2 3" = 1'-0"



33 TILE BASE @ STUD WALL
A-2.1 | A-9.2 3" = 1'-0"



23 TILE BASE @ CMU
A-7.1 | A-9.2 3" = 1'-0"



13 SCUPPER
A-2.2 | A-9.2 3" = 1'-0"

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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
INTERIOR & EXTERIOR DETAILS

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A-9.2
10/06/10
SHEET 27 OF 68
JOB NO. 1109531

FILE NO. ____

10/6/2010 2:45:04 PM
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BEACH PARKING LOT

EXISTING A.C. PARKING LOT

PROPOSED 6-INCH REINFORCED CONCRETE PAVEMENT. PROVIDE WEAKENED PLANE JOINTS AT 10-FOOT INTERVALS AND AS DIRECTED BY CITY INSPECTOR. INSTALL EXPANSION JOINT AT CONTACT POINT WITH ALL STRUCTURES

B C-2

C C-2

EXISTING CHAIN LINK FENCE TO BE REMOVED

PROPOSED 8' CHAIN LINK FENCE WITH PRIVACY SLATS PER STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION 600-2 (TYP.) 1

PROPERTY LINE

JOIN EXISTING CHAIN LINK FENCE

EXISTING CHAIN LINK FENCE (PROTECT IN PLACE)

PROPOSED SHOWER WALL

WEAKENED PLANE JOINT (TYP) SEE 2 C-8

EXISTING ELEC CONDUIT (TO BE REMOVED)

LIMITS OF OVEREXCAVATION SEE NOTE 1

PROPOSED 8'Ø PRECAST CONCRETE PUMP STATION WET WELL SEE SHEET C-5

EXISTING CHAIN LINK FENCE TO BE REMOVED

N22°44'00"W

SLOPE

RESTROOMS

LIFEGUARD STATION
F.F. EL. 19.75

PROPOSED 6' x 10' PRECAST CONCRETE PUMP STATION VALVE VAULT. SEE SHEET C-5

LIMITS OF GRADING

LIMITS OF OVEREXCAVATION SEE NOTE 1

A C-2

EXISTING A.C. BEACH TRAIL

SWALE

BEACH

EXISTING MONITORING WELL TO BE DESTROYED BY OTHERS

D C-2

FUTURE PUMP STATION CONTROL PANEL

PROPOSED 8' CHAIN LINK FENCE PER STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION 600-2 (TYP.) 1

PROPOSED 2" BACKFLOW PREVENTER SEE SHEET C-3

PROPOSED 2" WATER METER SEE SHEET C-3

PROPOSED MASONRY RETAINING WALL WITH 6' CHAIN LINK FENCE WITH PRIVACY SLATS. FOR DETAILS SEE STRUCTURAL DRAWINGS 1

CHEVRON

S00°02'41"W 44'-11"

PROPOSED WALL FOOTING

4'-4" N28°50'35"W

N90°00'00"W 70'-8"

JOIN EXISTING CHAIN LINK FENCE

EXISTING ELECTRICAL CONDUIT AND POSTS (PROTECT IN PLACE)

4' MAN GATE WITH PRIVACY SLATS PER SPPWC STD PLAN 600-2

INSTALL 8-FOOT HIGH CHAIN LINK FENCE WITH PRIVACY SLAB PER STANDARD PLAN FOR PUBLIC WORKS CONSTRUCTION 600-2

SWALE

LIMITS OF OVEREXCAVATION SEE NOTE 1

EXISTING CHAIN LINK FENCE (PROTECT IN PLACE)

EXCAVATION NOTES:

1. THE UPPER TWO FEET OF EXISTING SITE SOILS SHALL BE EXCAVATED AND PROPERLY COMPACTED WITHIN THE FOOTPRINT AREA OF THE PROPOSED STRUCTURE. WHERE REMOVAL AND RECOMPACTION IS TO BE CONDUCTED, THE EXCAVATION SHALL EXTEND LATERALLY A MINIMUM DISTANCE OF THREE FEET BEYOND THE IMPROVEMENT FOOTPRINT AREA OR FOR A DISTANCE EQUAL TO THE DEPTH OF FILL BELOW THE FOUNDATION, WHICHEVER IS GREATER. PROPOSED FOUNDATIONS SHALL BE UNDERLAIN BY AT LEAST TWO FEET OF NEWLY COMPACTED ENGINEERED FILL.
2. EXCAVATION UP TO FIVE FEET IN VERTICAL HEIGHT MAY BE REQUIRED FOR THE GRADING ACTIVITIES. THE EXCAVATIONS ARE EXPECTED TO PENETRATE ACTIVE DUNE AND SAND DEPOSITS, WHICH ARE SUITABLE FOR VERTICAL EXCAVATIONS UP TO FIVE FEET WHERE LOOSE SOILS OR CAVING SANDS ARE NOT PRESENT.
3. VERTICAL EXCAVATIONS GREATER THAN FIVE FEET SHALL REQUIRE SLOPING MEASURES IN ORDER TO PROVIDE A STABLE EXCAVATION. IT IS ANTICIPATED THAT SUFFICIENT SPACE IS AVAILABLE TO COMPLETE THE REQUIRED EARTHWORK FOR THIS PROJECT USING SLOPING MEASURES. IF NECESSARY, SHORING AND/OR ALTERNATIVE TEMPORARY EXCAVATION RECOMMENDATIONS WILL BE PROVIDED IN AN ADDENDUM.
4. WHERE SUFFICIENT SPACE IS AVAILABLE, TEMPORARY UNSURCHARGED EMBANKMENTS SHALL BE SLOPED BACK AT A UNIFORM 1:1 SLOPE GRADIENT OR FLATTER. A UNIFORM SLOPE DOES NOT HAVE A VERTICAL PORTION.
5. WHERE SLOPED EMBANKMENTS ARE UTILIZED, THE TOP OF THE SLOPE SHALL BE BARRICADED TO PREVENT VEHICLES AND STORAGE LOADS AT THE TOP OF THE SLOPE WITHIN A HORIZONTAL DISTANCE EQUAL TO THE HEIGHT OF THE SLOPE. IF THE TEMPORARY CONSTRUCTION EMBANKMENTS ARE TO BE MAINTAINED DURING THE RAINY SEASON, BERMS SHALL BE USED ALONG THE TOPS OF THE SLOPES WHERE NECESSARY TO PREVENT RUNOFF WATER FROM ENTERING THE EXCAVATION AND ERODING THE SLOPE FACES. GEOCON WEST, INC. PERSONNEL SHALL INSPECT THE SOILS EXPOSED IN THE CUT SLOPES DURING EXCAVATION SO THAT MODIFICATIONS OF THE SLOPES CAN BE MADE IF VARIATIONS IN THE SOIL CONDITIONS OCCUR. ALL EXCAVATIONS SHALL BE STABILIZED WITHIN 30 DAYS OF INITIAL EXCAVATION.

CONSTRUCTION PHASING NOTES:

CONTRACTOR SHALL CONSTRUCT NEW FENCING, AND WALLS AS THE FIRST PHASE OF WORK. NO EXISTING CHEVRON FENCING MAY BE REMOVED OR ANY SITE WORK STARTED UNTIL THE NEW FENCE IS IN PLACE. CONTRACTOR SHALL COORDINATE NEW FENCE AND WALL INSTALLATION WITH CHEVRON. 1

GRADING QUANTITIES

DESCRIPTION	VOLUME (yd^3)
TOTAL CUT	52.7
TOTAL FILL	20.3
TOTAL GRADING WORK	32.4
OVEREXCAVATION AND ENGINEERED FILL	774 cy
TOTAL EXPORT (NO COMPACTION)	806.4 cy

N

5 2.5 0 5 10

SCALE IN FEET
1 Inch = 5 ft.

REGISTERED PROFESSIONAL ENGINEER JOHN A. LOAGUE No. 50292 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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CITY OF EL SEGUNDO
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LIFEGUARD STATION
GRADING PLAN

PM J.L. DATE 10/10
DRAWN B.G. DATE 10/10
CHECK Z.K. DATE 10/10

APPROVED DATE

CITY ENGINEER R.E.

C-1
10/06/2010

SHEET 4 OF 68

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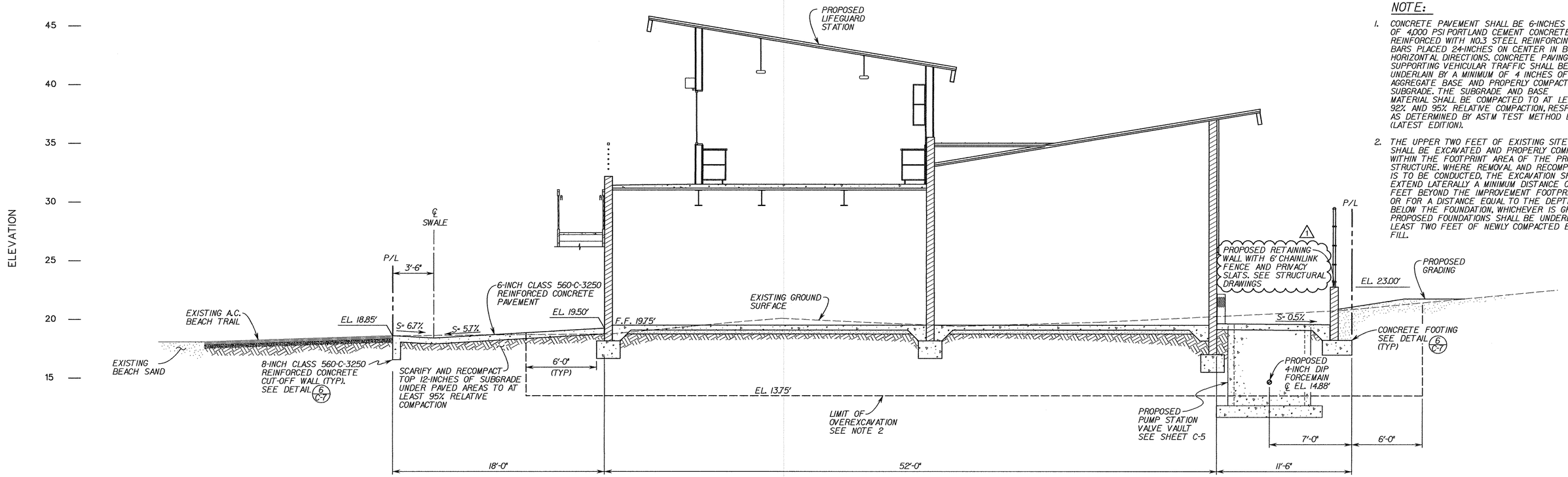
10/6/2010

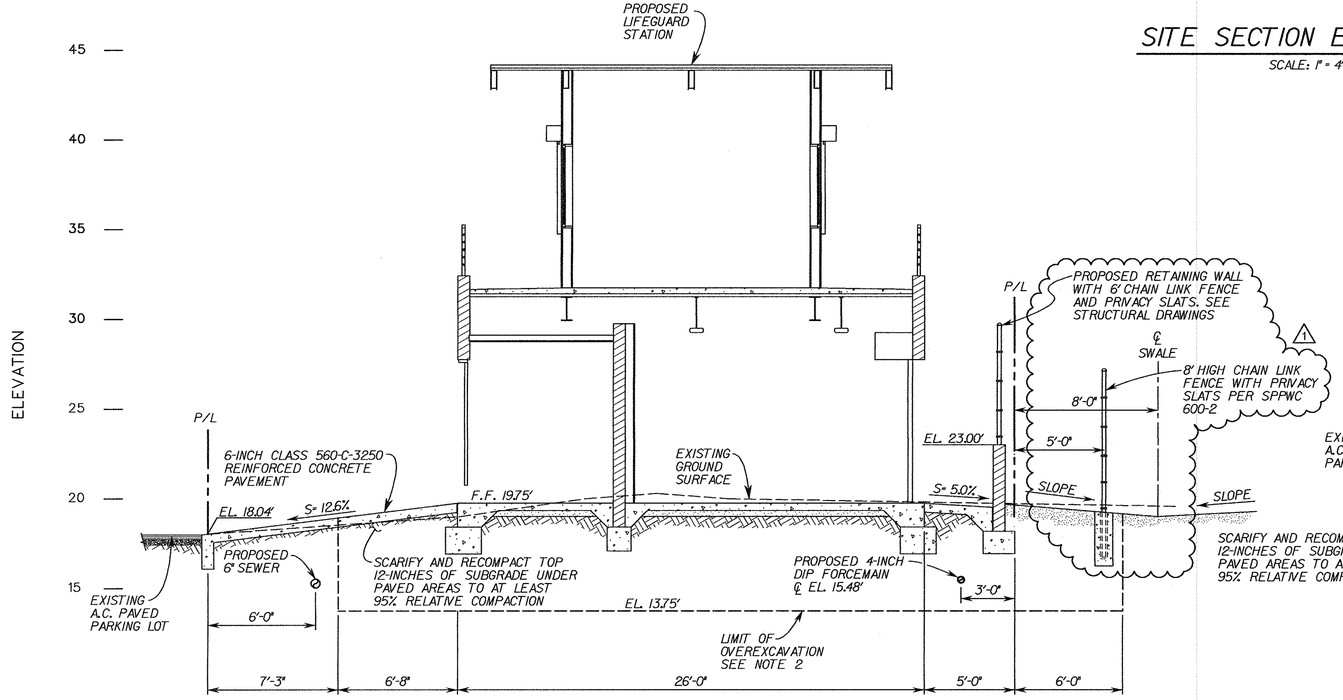


SITE SECTION EAST - WEST (A / C-1)

SCALE: 1" = 4'-0"

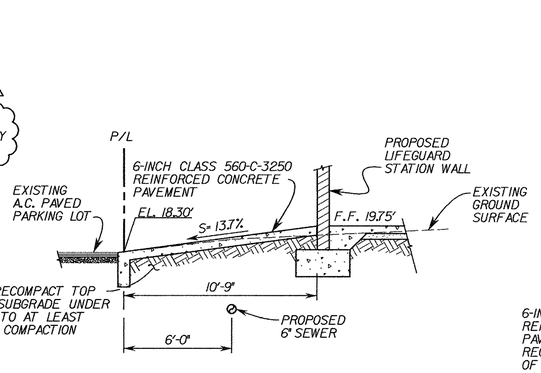
NOTE:

1. CONCRETE PAVEMENT SHALL BE 6-INCHES OF 4,000 PSI PORTLAND CEMENT CONCRETE REINFORCED WITH NO.3 STEEL REINFORCING BARS PLACED 24-INCHES ON CENTER IN BOTH HORIZONTAL DIRECTIONS. CONCRETE PAVING SUPPORTING VEHICULAR TRAFFIC SHALL BE UNDERLAIN BY A MINIMUM OF 4 INCHES OF AGGREGATE BASE AND PROPERLY COMPACTED SUBGRADE. THE SUBGRADE AND BASE MATERIAL SHALL BE COMPACTED TO AT LEAST 92% AND 95% RELATIVE COMPACTION, RESPECTIVELY, AS DETERMINED BY ASTM TEST METHOD D1557 (LATEST EDITION).
2. THE UPPER TWO FEET OF EXISTING SITE SOILS SHALL BE EXCAVATED AND PROPERLY COMPACTED WITHIN THE FOOTPRINT AREA OF THE PROPOSED STRUCTURE. WHERE REMOVAL AND RECOMPACTION IS TO BE CONDUCTED, THE EXCAVATION SHALL EXTEND LATERALLY A MINIMUM DISTANCE OF THREE FEET BEYOND THE IMPROVEMENT FOOTPRINT AREA OR FOR A DISTANCE EQUAL TO THE DEPTH OF FILL BELOW THE FOUNDATION, WHICHEVER IS GREATER. PROPOSED FOUNDATIONS SHALL BE UNDERLAIN BY AT LEAST TWO FEET OF NEWLY COMPACTED ENGINEERED FILL.



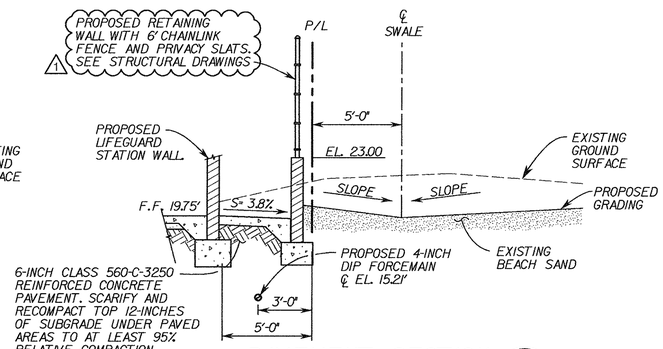
SITE SECTION NORTH - SOUTH (B / C-1)

SCALE: 1" = 4'-0"



PAVEMENT SECTION (C / C-1)

SCALE: 1" = 4'-0"



PAVEMENT SECTION (D / C-1)

SCALE: 1" = 4'-0"

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LIFEGUARD STATION
SITE SECTIONS

PM J.L. DATE 10/10
DRAWN B.G. DATE 10/10
CHECK Z.K. DATE 10/10

APPROVED DATE
CITY ENGINEER R.E.

C-2
10/06/2010

SHEET 5 OF 68

JOB NO. 1109531

10/4/2010 N:\1109\ESegundo\PW\Lifeguard Pump Station\Phase II\W_C-2 grade section

GENERAL NOTES

38. STRAIGHT FEEDER, BRANCH CIRCUIT, AND CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS. LOCATIONS SHALL BE DETERMINED IN THE FIELD OR AS INDICATED ON THE DRAWINGS.

39. MAXIMUM NUMBER OF CONDUCTORS IN OUTLET OR JUNCTION BOXES SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE, ARTICLE 370-6, BUT IN NO CASE SHALL CONTAIN MORE THAN THE FOLLOWING NUMBER OF #12 AWG CONDUCTORS FOR THE SIZE OF BOX INDICATED. THE MINIMUM SIZE OUTLET OR JUNCTION BOX PERMITTED IN A WALL IS FOUR INCHES SQUARE BY 1-1/2 INCHES DEEP.

4" SQ. BY 1-1/2" D	=	9	CONDUCTORS
4" SQ. BY 2-1/8" D	=	13	CONDUCTORS
4 11/16" SQ. BY 1-1/2" D	=	11	CONDUCTORS
4 11/16" SQ. BY 2-1/8" D	=	18	CONDUCTORS

ALL OUTLET BOXES CONTAINING MORE THAN ONE DEVICE SHALL BE GANGED. TWO DEVICES DOUBLE GANGED, MINIMUM.

40. WHERE MULTI-HOMERUNS ARE INDICATED ON DRAWINGS INDICATING THE SAME PANELBOARD CIRCUIT NUMBER, PROVIDE JUNCTION BOX ABOVE ACCESSIBLE CEILING AND ROUTE ONE SET OF WIRES TO CIRCUIT BREAKERS.

41. THE NUMERALS SHOWN AT TOP OF LIGHT FIXTURE IDENTIFICATION SYMBOLS INDICATING THE NUMBER OF LIGHT FIXTURES REQUIRED SHALL NOT BE USED BY THE CONTRACTOR FOR HIS QUANTITY TAKE-OFF AT BIDDING, NOR FOR DETERMINATION OF HOW MANY FIXTURES WILL BE INSTALLED. THE CONTRACTOR SHALL INSTALL A LIGHT FIXTURE WHEREVER A FIXTURE OUTLET IS SHOWN ON THE DRAWINGS.

42. RECESSED PANELS AND CABINETS SHALL HAVE FIVE SPARE 3/4 INCH CONDUITS STUBBED UP INTO AN ACCESSIBLE CEILING SPACE AND CAPPED UNLESS OTHERWISE NOTED.

43. IDENTIFICATION NAMEPLATES SHALL BE MICARTA 1/8 INCH THICK AND OF APPROVED SIZE WITH BEVELLED EDGES AND ENGRAVED WHITE LETTERS A MINIMUM OF 1/4 INCH HIGH ON BLACK BACKGROUND. NAMEPLATES SHALL BE PROVIDED FOR ALL CIRCUITS IN THE SERVICE DISTRIBUTION AND POWER DISTRIBUTION SWITCHBOARDS OR PANELBOARDS, MOTOR CONTROL CENTERS, LIGHTING DISTRIBUTION PANELBOARDS, SEPARATELY MOUNTED STARTING SWITCHES, DISCONNECTING SWITCHES, MOTOR CONTROL PUSHBUTTON STATIONS, SELECTOR SWITCHES, TRANSFORMERS, TERMINAL CABINETS, TELEPHONE CABINETS, ETC. ALL NAMEPLATES SHALL BE ATTACHED WITH SCREWS. PULL BOXES, JUNCTION BOXES, AND DEVICE BOXES SHALL BE MARKED WITH A PERMANENT MARKER.

44. THE EXACT LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS, DETAILS, OR SECTIONS PRIOR TO INSTALLATION. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED IN WALLS UNLESS OTHERWISE NOTED. OUTLETS NOT INDICATED ON ARCHITECTURAL ELEVATIONS SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN. UNLESS OTHERWISE NOTED, MOUNT ELECTRICAL DEVICES AT THE FOLLOWING HEIGHTS:

WALL SWITCH	+4'-0"	SET VERTICALLY
CONVENIENCE RECEPTACLE	+1'-6"	SET VERTICALLY
TELEPHONE/DATA OUTLETS	+1'-6"	SET VERTICALLY.
OUTLETS AT COUNTERS	+6"	ABOVE COUNTERS WITHOUT SPLASHES OR CENTERED IN SPLASH SET HORIZONTALLY

REVIEW ARCHITECTURAL ELEVATIONS OF CASEWORK. OUTLETS MOUNTED ABOVE OR BELOW, OR ADJACENT TO CASEWORK SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS, PRIOR TO FINAL ROUGH-IN. ELECTRICAL DRAWINGS SHALL GOVERN NUMBER AND TYPE OF OUTLETS. HOWEVER, LOCATIONS SHALL BE AS INDICATED ON ARCHITECTURAL ELEVATIONS. PROVIDE CONDUIT, WIRES, AND OUTLETS FOR WORK REQUIRED IN CASEWORK INSTALLATIONS. REFERENCE ARCHITECTURAL DETAILS FOR METHOD OF ROUTING CONDUIT WITHIN CASEWORK CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT-OUTS IN TILE OR COUNTER SPLASHES WHERE RECEPTACLES, OUTLETS, ETC., OCCUR. PROVIDE BOX EXTENSIONS THROUGH ALL CASEWORK. FINISH FLUSH WITH FACE OF SPLASH, CABINET, ETC.

MOUNTING HEIGHTS OF ALL DEVICES AND EQUIPMENT ARE FROM FINISHED FLOOR TO CENTER OF DEVICES AND EQUIPMENT UNLESS OTHERWISE NOTED. BOXES INSTALLED IN LOCATIONS NOT APPROVED BY THE ARCHITECT SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

45. DRAWINGS ARE DIAGRAMMATIC ONLY. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE CONTRACTOR UNLESS OTHERWISE NOTED AND SHALL BE COORDINATED WITH OTHER SECTIONS. DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, OR MECHANICAL ITEMS OR FEATURES.

46. WHERE FIXTURES ARE SHOWN TO BE DUAL SWITCHED, SWITCH Sa SHALL CONTROL THE TWO OUTSIDE LAMPS IN EACH FIXTURE, Sb SHALL CONTROL THE REMAINING LAMPS IN EACH FIXTURE.

47. THE EQUIPMENT GROUNDING CONDUCTOR SHOWN ON CONDUIT RUNS SHALL RUN CONTINUOUS FROM PANEL TO LAST OUTLET. THIS WIRE SHALL BE PIGTAILED IN EACH OUTLET FOR CONNECTION TO BOX AND DEVICE SO THAT IF DEVICE IS REMOVED, GROUND WILL NOT BE INTERRUPTED. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSULATED GREEN CONDUCTORS - ALTERNATE METHODS OF IDENTIFICATION SHALL NOT BE USED. CONTRACTOR SHALL NOTIFY ELECTRICAL ENGINEER TO EXAMINE CONDUCTOR INSTALLATION PRIOR TO INSTALLATION OF DEVICES.

48. REFERENCE ARCHITECTURE AND STRUCTURAL DRAWINGS FOR HOUSEKEEPING PADS.

49. OPERATING ROOMS, DELIVERY ROOMS, EMERGENCY TRAUMA ROOMS, AND SIMILARLY USED SUITES SHALL USE NON-FLAMMABLE ANESTHETICS.

50. FURNISH AND INSTALL POWER DISTRIBUTION PANELBOARDS AS INDICATED ON THE DRAWINGS. PANELBOARDS SHALL COMPLY WITH NEMA STANDARD FOR PANELBOARDS AND FEDERAL SPECIFICATION W-P-115A. PANELBOARDS SHALL BE COMPLETE WITH COPPER BUS BARS AND 40 DEGREE CELSIUS THERMAL MAGNETIC BOLT-ON TYPE CIRCUIT BREAKERS AS INDICATED ON DRAWINGS. PANELBOARDS SHALL BE SQUARE D OR EQUAL BY SIEMENS, ITE, WESTINGHOUSE, OR GENERAL ELECTRIC.

51. RECEPTACLES SHALL BE HOSPITAL GRADE, 20 AMP, NEMA 5-20R GROUNDING TYPE HUBBELL #8300, OR EQUAL BY PASS & SEYMOUR OR GENERAL ELECTRIC. COLOR SHALL BE SELECTED BY ARCHITECT. EMERGENCY RECEPTACLES SHALL BE RED IN COLOR.

52. SWITCHES SHALL BE 20 AMP, 120/277 VOLT RATED SILENT TYPE SPECIFICATION GRADE HUBBELL OR EQUAL BY PASS & SEYMOUR OR GENERAL ELECTRIC. COLOR SHALL BE SELECTED BY ARCHITECT. EMERGENCY SWITCHES SHALL BE RED IN COLOR.

53. DEVICE PLATES SHALL BE NYLON FOR THE NUMBER OF GANGS AND TYPE OF OPENINGS NECESSARY, HUBBELL OR EQUAL BY PASS & SEYMOUR OR GENERAL ELECTRIC. COLOR SHALL BE SELECTED BY ARCHITECT. EMERGENCY RECEPTACLE PLATES SHALL BE RED IN COLOR. PLATES SHALL BE ENGRAVED WITH PANEL AND CIRCUIT NUMBER.

54. RIGID GALVANIZED STEEL CONDUIT SHALL BE FULL WEIGHT TREADED TYPE ALUMINUM OR STEEL. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN WALLS OR CEILING SPACES WHERE NOT SUBJECT TO MECHANICAL DAMAGE. PVC SCHEDULE 40 MAY BE INSTALLED BENEATH SLAB OR BELOW GRADE. FLEXIBLE STEEL CONDUIT MAY BE USED AT FIXTURE AND OUTLET CONNECTIONS WITH NO RUNS LONGER THAN SIX FEET. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN ALL CONDUIT RUNS.

55. RIGID GALVANIZED STEEL CONDUIT FITTINGS SHALL BE THREADED AND THOROUGHLY GALVANIZED. ELECTRICAL METALLIC TUBING (EMT) CONDUIT FITTINGS SHALL BE STEEL, RAINTIGHT THREADLESS COMPRESSION TYPE. DIE CAST, SET SCREW, OR INDENTER TYPES ARE NOT ACCEPTABLE. FLEXIBLE STEEL CONDUIT FITTINGS SHALL BE MALLEABLE IRON CLAMP, SQUEEZE TYPE OR STEEL TWIST-IN TYPE WITH INSULATED THROAT. SET SCREW TYPE IS NOT ACCEPTABLE.

56. FOR SMALL AC MOTORS NOT HAVING BUILT-IN THERMAL OVERLOAD PROTECTION, PROVIDE MANUAL MOTOR STARTERS WITH OVERLOAD HEATER ELEMENTS SIZED TO THE NAMEPLATE CURRENT RATING OF THE MOTOR. SMALL AC MOTORS WITH BUILT-IN THERMAL OVERLOAD PROTECTION, PROVIDE A HORSEPOWER RATED TOGGLE TYPE DISCONNECT SWITCH.

57. SAFETY SWITCHES SHALL BE HEAVY DUTY NEMA TYPE HD BY SQUARE D, SIEMENS, GENERAL ELECTRIC OR WESTINGHOUSE. SWITCHES SHALL BE RATED FOR THE NUMBER OF POLES, VOLTAGE, CURRENT AND HORSEPOWER RATING AS REQUIRED. PROVIDE FUSE PROTECTION BASED ON THE MOTOR NAMEPLATE RATINGS.

58. TERMINAL CABINETS SHALL BE GALVANIZED CODE SHEET STEEL, FLUSH OR SURFACE MOUNTED AS INDICATED ON THE DRAWINGS, OF IDENTICAL MANUFACTURE AS BRANCH CIRCUIT PANELS. FLUSH MOUNTED CABINETS SHALL BE PRIMED AND PAINTED. FINISH COLOR AS SELECTED BY ARCHITECT.

59. ALL CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM SIZE, TYPE THHN/THWN THERMOPLASTIC, 600 VOLT, 75 DEGREES CELSIUS WET AND 90 DEGREES CELSIUS DRY AND UL LISTED UNLESS NOTED OTHERWISE. CONDUCTORS #12 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS # 10 AWG AND LARGER SHALL BE STRANDED.

60. JUNCTION AND PULL BOXES: FOR INTERIOR DRY LOCATIONS, BOXES SHALL BE GALVANIZED ONE-PIECE, DRAWN STEEL, KNOCKOUT TYPE WITH REMOVABLE MACHINE SCREW SECURED COVERS. FOR OUTSIDE, DAMP, OR SURFACE LOCATIONS, BOXES SHALL BE HEAVY CAST ALUMINUM OR CAST IRON WITH REMOVABLE, GASKETED, NON-FERROUS MACHINE SCREW SECURED COVERS. BOXES SHALL BE SIZED FOR THE NUMBER AND SIZES OF CONDUCTORS AND CONDUIT ENTERING THE BOX AND EQUIPPED WITH PLASTER EXTENSION RINGS WHERE REQUIRED. BOXES SHALL BE LABELED TO INDICATE PANEL AND CIRCUIT NUMBER, OR TYPE OF SIGNAL OR COMMUNICATIONS SYSTEM.

61. BALLASTS SHALL BE ELECTRONIC TYPE 265 M.A., HIGH POWER FACTOR, U.L. LISTED CLASS "P", AND THERMALLY PROTECTED. FIXTURE SHALL HAVE A PRIMARY INPUT VOLTAGE AS SHOWN ON THE ELECTRICAL PLANS AND SCHEDULES.

62. LAMPS: ALL FIXTURES SHALL BE SUPPLIED WITH LAMPS OF PROPER SIZE AND TYPE.

INCANDESCENT LAMPS SHALL BE NEW, RATED FOR 130 VOLTS, 60 CYCLES, AC OPERATION AND SHALL BE GENERAL SERVICE INSIDE FROSTED UNLESS SPECIFICALLY NOTED OTHERWISE.

FLUORESCENT LAMPS SHALL BE RAPID START ENERGY SAVING TYPE, GENERAL ELECTRIC WATT-MISER OR EQUAL BY SYLVANIA OR PHILIPS UNLESS NOTED OTHERWISE.

FIXTURES WITH DIMMING BALLASTS SHALL USE STANDARD 40 WATT NON-ENERGY SAVING TYPE RAPID START LAMPS BY GE, SYLVANIA OR PHILIPS.

MERCURY VAPOR, METAL HALIDE AND HIGH PRESSURE SODIUM LAMPS SHALL BE AS RECOMMENDED BY THE FIXTURE MANUFACTURER AND AS INDICATED IN THE FIXTURE SCHEDULE.

63. WHERE LIGHTING FIXTURES REQUIRE THE USE OF ACRYLIC PLASTIC LENSES, THEY SHALL BE 100 PERCENT VIRGIN ACRYLIC THERMOPLASTIC NOT LESS THAN 0.125 INCHES THICK WITH AN UNPENETRATED DEPTH OF NOT LESS THAN 0.045 INCHES EQUAL TO KSH-K12 UNLESS NOTED OTHERWISE.

64. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS, SPECIFICATIONS AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT IN GENERAL CHARGE OF DESIGN AND THE SIGNATURE OF THE ARCHITECT OR PROFESSIONAL ENGINEER WHO HAS BEEN DELEGATED RESPONSIBILITY COVERING THE WORK SHOWN ON A PARTICULAR PLAN OR SPECIFICATION, AND APPROVED BY OSHPD. THE FIRE ALARM SYSTEM INDICATED IN THESE DRAWINGS SHALL BE USED FOR BIDDING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT FIRE ALARM SYSTEM SHOP DRAWINGS TO OSHPD FOR APPROVAL PRIOR TO INSTALLATION. SYSTEM SHALL MEET THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.

65. SIGNAL AND COMMUNICATIONS SYSTEMS (INTERCOM, TELEPHONE, DATA, PAGING, CORRECTIVE CLOCK, NURSE CALL AND CODE BLUE SYSTEMS): PROVIDE A COMPLETE AND OPERABLE EXTENSION TO THE EXISTING SYSTEMS AS INDICATED ON THE DRAWINGS. THESE SYSTEMS SHALL BE PROVIDED AS A SINGLE SUBCONTRACT UNDER THE ELECTRICAL CONTRACT. IN THE INTEREST OF MAINTENANCE CONVENIENCE AND CAPABILITY, THE NEW EQUIPMENT SHALL MATCH THAT OF EXISTING SYSTEMS AS INSTALLED IN ADJACENT AREAS. ALL EQUIPMENT AND CABLE SHALL BE PROVIDED BY THE AUTHORIZED DISTRIBUTOR. PROVIDE ALL BACKBOXES PER MANUFACTURER'S REQUIREMENTS. SUBMIT ENGINEERED SHOP DRAWINGS FOR EACH SIGNAL AND COMMUNICATION SYSTEM TO THE ARCHITECT FOR REVIEW.

66. SEE DETAIL SHEET E0.8 FOR TYPICAL DETAILS FOR LIGHT FIXTURE SUPPORT, PANEL BOARD MOUNTING AND UNDERGROUND CONDUIT.

LEGEND

SYMBOL	DESCRIPTION
	GENERAL SYMBOLS
———	CONDUIT RUN, CONCEALED IN CEILING, WALLS OR UNDER FLOORS.
- - - - - - -	CONDUIT RUN EXPOSED.
—— ——	CONDUIT RUN UNDERGROUND.
———→	CONDUIT STUBBED OUT AND CAPPED. PULL LINE IN PLACE.
AIC	"AMPERES INTERRUPTING CAPACITY"
RMS	"ROOT MEAN SQUARED"
KW	"KILOWATT"
KVA	"KILOVOLT - AMPERES"
V	"VOLTS"
A	"AMPS"
WP	WEATHERPROOF, NEMA 3R
KWH	KILOWATT HOURS
AFF	ABOVE FINISHED FLOOR
O.C.	"ON CENTER"
UNO	UNLESS NOTED OTHERWISE
C.O.	"CONDUIT ONLY". PROVIDE PULL ROPE FOR ALL EMPTY CONDUIT.
C.	"CONDUIT", WITH CONDUCTORS AS REQUIRED BY DRAWINGS OR SPECIFICATIONS.
B-1,3 → 0	CONDUIT HOMERUN TO PANELBOARD. LETTER AND NUMERALS INDICATE ELECTRICAL PANEL AND CIRCUIT NUMBER.
	SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD.
L1	PANEL DESIGNATION.
	SURFACE MOUNTED COMMUNICATION TERMINAL CABINET. REFER TO DRAWINGS AND SPECIFICATIONS.
J	JUNCTION BOX IN ACCESSIBLE CEILING SPACE OR FLUSH IN WALL WITH BLANK COVER PLATE TO MATCH DEVICE PLATES.
	SINGLE LINE DIAGRAM SYMBOLS
100AF / 70AT — 3P	MOLDED CASE CIRCUIT BREAKER. "AF" INDICATES AMPERE FRAME, "AT" INDICATES AMPERE TRIP RATING AND NUMBER OF POLES AS INDICATED. SUBSCRIPT INDICATES TYPE.
	NO SUBSCRIPT — THERMAL MAGNETIC NA — NON-AUTOMATIC MO — MAGNETIC ONLY CL — CURRENT LIMITING SS — SOLID STATE EM — ELECTRONIC METERING PACKING
	VOLTAGE TRANSFORMER. FLOOR MOUNTED, COPPER WOUND, DRY TYPE UNLESS SPECIFIED OTHERWISE.
M	UTILITY METER SOCKET, WITH C.T.s, CLIPS, ETC., PER SERVING UTILITY COMPANY.
	GROUND, "GRD".
GFI	"GROUND FAULT INTERRUPTER"
GFP	GROUND FAULT PROTECTION DEVICE.
GFS	GROUND FAULT SENSOR.
	LIGHTING SYMBOLS
1,1a 1a	FLUORESCENT LIGHT FIXTURE OUTLET. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. HALF SHADED FIXTURE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS.
	FLUORESCENT STRIP FIXTURE. LOWER CASE LETTER INDICATES CONTROLLING SWITCH. NUMERAL INDICATES CIRCUIT.
	BRACKET OR WALL MOUNTED LIGHT FIXTURE AND OUTLET, HID, FLUORESCENT OR INCANDESCENT. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. SHADED FIXTURE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS.
1,1a 1a	
Q 21 / 106 / +9'-0"	LIGHTING FIXTURE IDENTIFICATION SYMBOL. LETTER INDICATES FIXTURE TYPE. NUMERALS IN LOWER HALF OF HEXAGON INDICATE FIXTURE WATTAGE (INCLUDING BALLAST WHERE APPLICABLE). NUMERAL OUTSIDE TOP OF HEXAGON INDICATES NUMBER OF FIXTURES REQUIRED. NUMERAL OUTSIDE BOTTOM OF HEXAGON INDICATES MOUNTING HEIGHT FROM FLOOR TO BOTTOM OF FIXTURE. OMISSION OF MOUNTING HEIGHT INDICATES CEILING MOUNTING.
S	WALL MOUNTED PASSIVE INFRARED OCCUPANCY SENSOR. MOUNT AT + 48 INCHES.
OS	OCCUPANCY SENSOR COMPLETE WITH ALL POWER SUPPLIES, RELAY PACKS AND CONNECTIONS. REFER TO SPECIFICATIONS FOR TYPE AND DESCRIPTION.
3K Sa	SWITCH. LOWER CASE LETTER AT BOTTOM INDICATES OUTLETS CONTROLLED. CAPITAL SUPERSCRIPT INDICATES SWITCH TYPE. NO SUPERSCRIPT - SINGLE POLE SWITCH 3 - THREE WAY M - MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION

SYMBOL	DESCRIPTION
	POWER SYMBOLS
	DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE.
	DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE.
	ELECTRIC RANGE RECEPTACLE. COORDINATE WITH RANGE MANUFACTURER FOR TYPE.
100AS / 60AFU	FUSED DISCONNECT SWITCH. "AS" INDICATES SWITCH AMPERE RATING. "AFU" INDICATES FUSE AMPERE RATING.
	SINGLE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER MOTOR.
— OHP —	OVERHEAD POWER LINE.
	FIRE ALARM SYMBOLS
	FIRE ALARM SYSTEM CONDUIT RUN. 3/4 INCH CONDUIT MINIMUM UNLESS INDICATED OTHERWISE ON DRAWINGS. REFER TO DRAWINGS AND SPECIFICATIONS FOR REQUIRED WIRING.
F	FIRE ALARM PULL STATION. MOUNT AT +48 INCHES UNLESS OTHERWISE NOTED.
	FIRE ALARM COMBINATION HORN/VISUAL STROBE. MOUNT AT +80 INCHES ABOVE HIGHEST FLOOR LEVEL IN ROOM OR 6 INCHES BELOW CEILING, WHICHEVER IS LOWER. VISUALS SHALL BE 30 CANDELA (75 CD ON AXIS) U.N.O. 15 CD OR 110 CD DEVICES SHALL BE PROVIDED AS PER NFPA 72.
H WP	FIRE ALARM HORN, WEATHERPROOF, MOUNT +90" AFG TO TOP OF DEVICE. (1)
FACP	FIRE ALARM CONTROL PANEL, "FACP". REFER TO SPECIFICATIONS.
F	FIRE ALARM VISUAL STROBE. MOUNT AT +80 INCHES ABOVE HIGHEST FLOOR LEVEL IN ROOM OR 6 INCHES BELOW CEILING, WHICHEVER IS LOWER.
SD	PHOTOELECTRIC TYPE SMOKE DETECTOR MOUNTED ON CEILING OR WALL PER DRAWINGS. ASTERISK (*) ADJACENT INDICATES RELAY BASED AND LISTED FOR DOOR CONTROL.
HD	HEAT DETECTOR MOUNTED ON CEILING OR WALL PER DRAWINGS. COMBINATION RATE OF RISE AND 135 DEGREES C FIXED TEMPERATURE TYPE.
	TELEPHONE SYSTEM SYMBOLS
	TELEPHONE TERMINAL BACKBOARD "TTB". 3/4 INCH SANDED AND PAINTED CPX PLYWOOD, 4' X 8' UNLESS NOTED OTHERWISE.
— T —	TELEPHONE CONDUIT RUN WITH PULL LINE IN PLACE. "T" INDICATES 3/4 INCH CONDUIT ONLY, "T1" INDICATES 1 INCH CONDUIT ONLY, "T2" INDICATES 1-1/4 INCH CONDUIT ONLY.
W	TELEPHONE OUTLET. MOUNT AT +48 INCHES TO CENTER UNLESS OTHERWISE NOTED. CONDUIT ONLY WITH PULL LINE TO TELEPHONE TERMINAL BACKBOARD.
— OHT —	OVERHEAD TELEPHONE LINE.
	COMPUTER SYSTEM SYMBOLS
— CD —	COMPUTER SYSTEM CONDUIT RUN. 3/4 INCH CONDUIT MINIMUM STUBBED UP INTO CEILING SPACE UNLESS OTHERWISE INDICATED ON DRAWINGS.
	COMPUTER OUTLET, MOUNT AT +15 INCHES TO CENTER UNLESS OTHERWISE NOTED.
	COMBINATION VOICE/DATA OUTLET. 4S BOX WITH 2 GANG RING AND PLATE. ENGRAVE PLATE "VOICE" AND "DATA" OVER RESPECTIVE JACKS. VERIFY TYPE OF JACK WITH SYSTEM SUPPLIER.
	PUBLIC ADDRESS SYSTEM SYMBOLS
— S —	SOUND SYSTEM CONDUIT RUN. 3/4 INCH CONDUIT MINIMUM UNLESS INDICATED OTHERWISE ON DRAWINGS. REFER TO DRAWINGS AND SPECIFICATIONS FOR REQUIRED WIRING.
VC	VOLUME CONTROL. MOUNT AT +48 INCHES UNLESS OTHERWISE NOTED.
MC	MICROPHONE OUTLET WITH PROPER CONNECTOR.
S	PROJECTION TYPE SPEAKER HORN.
	SECURITY AND INTRUSION SYSTEM SYMBOLS
— SI —	SECURITY/INTRUSION SYSTEM CONDUIT. RUN 3/4 INCH CONDUIT MINIMUM UNLESS OTHERWISE NOTED. REFER TO SPECIFICATIONS FOR REQUIRED WIRING.
K	DIGITAL KEY PAD FOR SECURITY SYSTEM. MOUNT AT +48 INCHES ON CENTER. REFER TO SPECIFICATIONS.
CR	ACCESS CONTROL CARD READER STATION. REFER TO SPECIFICATIONS.
	PASSIVE INFRARED MOTION DETECTOR. REFER TO SPECIFICATIONS. MOUNT PER MANUFACTURER'S REQUIREMENTS.
DC	INTRUSION DETECTION DOOR SWITCH. CONCEALED IN DOOR FRAME, ROLLER BALL TYPE UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS. ROUTE WIRING THROUGH STEEL DOOR FRAME.

PROJECT ADDRESS:
EL SEGUNDO, CA

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REVISIONS

NO.	DATE	BY
1	10/06/2010	MD

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
GENERAL NOTES & LEGEND

PM DATE
DRAWN SM DATE
CHECK NI DATE

APPROVED DATE
CITY ENGINEER R.E.

E-0.2
10/06/2010
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JOB NO. 1109531

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PANEL-LG

MOUNTING: SURFACE — LOCATION: UTILITY ROOM 109

VOLTAGE: 120/208V,3P,4W — 10,000 AIC SYM — 225 AMP BUS — 225A-3P MCB

NOTE	DESCRIPTION	VOLT-AMPERES A	B	C	LITE	RECP	MISC	POLE	BKR	CIRC	CIRC	BKR	POLE	MISC	RECP	LITE	VOLT-AMPERES A	B	C	DESCRIPTION	NOTE
	RM 101 & 102	1077			.			1	20	1	2	20	1	6			1080			RECEP RM 109,04,03,01	
	RM 109,108,107,106,105,103,102		832		.			1	20	3	4	20	1	5				900		RECEP RM 109,04,02,01	
	EXTERIOR LIGHTS			273	.			1	20	5	6	20	1	6					1080	RECEP RM 104,01	
	LIGHTING CONTROL PNL	500					1	1	20	7	8	20	1							SPARE	
1	FACP		500				1	1	20	9	10	20	1							SPARE	
	FUTURE VAULT EXH FAN			1176				1	20	11	12	20	1							SPARE	
	FUTURE VAULT LIGHT	150						1	20	13	14	20	1	3			540			RECEP RM 201,202	
	FUTURE VAULT SUMP PUMP		1176					1	20	15	16	20	1	3				540		RECEP ROM 201,202	
	FUTURE VAULT FLOW METER			100				1	20	17	18	20	1	1					1000	GENERAL APPLICANCE	
	FUTURE VAULT OUTLET	500						1	20	19	20	20	1	1						SPARE	
	FUTURE PUMP STA OUTLET		500					1	20	21	22	20	1	1				1000		GENERAL APPLICANCE	
	FUTURE PUMP STA CONTROL PANEL			100				1	20	23	24	20	1	1					1000	GENERAL APPLICANCE	
	FUTURE PUMP STA POWER MONITOR	100						1	20	25	26	20	1	1			1000			GENERAL APPLICANCE	
	SPARE							1	20	27	28	20	1							SPARE	
	SPARE							1	20	29	30	20	1							SPARE	
	SPACE									31	32	20	1							SPARE	
	SPACE									33	34	20	1							SPARE	
	SPACE									35	36	20	1							SPARE	
	SPACE									37	38									SPACE	
	SPACE									39	40									SPACE	
	SPACE									41	42									SPACE	
	SUBTOTAL	2327	3008	1649													2620	2440	3080	SUBTOTAL	
																	4947	5448	4729	VA PER PHASE	
																		15.1 KVA		TOTAL CONNECTED LOAD	

CONTINUOUS LOAD, 2182 VA X 1.25 = 2728 VA
+ OTHER LOAD = 12942 VA
TOTAL LOAD = 15670 VA
OR = 44 AMPS

28 CONVENIENCE OUTLETS
2 MISCELLANEOUS OUTLETS

NOTES

1. PROVIDE LOCK-ON DEVICE
2.
3.
4.

KEY NOTES ◇#

1. ELECTRICAL RANGE OUTLET. PROVIDE/INSTALL MATCHING CORD AND PLUG.
2. CONDUIT STUB-OUT FOR FUTURE EQUIPMENT CONNECTION.
3. INSTALL 1 INCH CONDUIT WITH #1/0 GROUNDING ELECTRODE CONDUCTOR TO UFER GROUND SYSTEM CABLE. UFER GROUND SYSTEM SHALL BE 40 FEET OF #1/0 BARE COPPER GROUND WITH 3/4 INCH ROUND BY 10 FEET SOLID COPPER GROUND ROD AT EACH END OF 1/0 BARE COPPER CABLE.
4. INSTALL 1 INCH CONDUIT - ONE #1/0 TO ACCESSIBLE COLD WATER LINES & BUILDING STEEL FRAME. CONNECT TO WATER MAIN AT BACKFLOW PREVENTER AT SERVICE ENTRY. REFER TO PLUMBING DRAWINGS FOR LOCATIONS. CONNECT USING APPROVED GROUNDING CLAMPS.
5. FURNISH GROUND BUS IN EACH BRANCH CIRCUIT PANEL. ALL PANELS 208/120 VOLT, SHALL HAVE THE FEEDER EQUIPMENT GROUNDING CONDUCTOR AND BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR CONNECTED TO GROUND BUS. FURNISH EQUIPMENT GROUNDING CONDUCTOR IN EVERY FEEDER AND BRANCH CIRCUIT, RUN TO LAST OUTLET AND CONNECT TO BUS. CONDUIT GROUND IS NOT ACCEPTABLE AS A SUBSTITUTE. TYPICAL ALL PANELS AND SWITCHBOARDS.
6. INSTALL FEEDER CONDUIT EQUIPMENT GROUNDING CONDUCTOR, BRANCH FEEDER EQUIPMENT GROUNDING CONDUCTORS, AND PANEL FRAME GROUND STRAP TO FULL LENGTH COPPER GROUND BUS. DO NOT JUMPER NEUTRAL AND GROUND BUSES IN PANELS. TYPICAL FOR ALL DISTRIBUTION PANELS AND MOTOR CONTROLLER.
7. PROVIDE/INSTALL NEW CIRCUIT BREAKER IN CHEVRON MAIN SWITCHBOARD. NEW CIRCUIT BREAKER SHALL BE COMPATIBLE WITH THE CHEVRON'S MAIN SWITCHBOARD.

MS - LOAD SUMMARY & FEEDER SCHEDULE

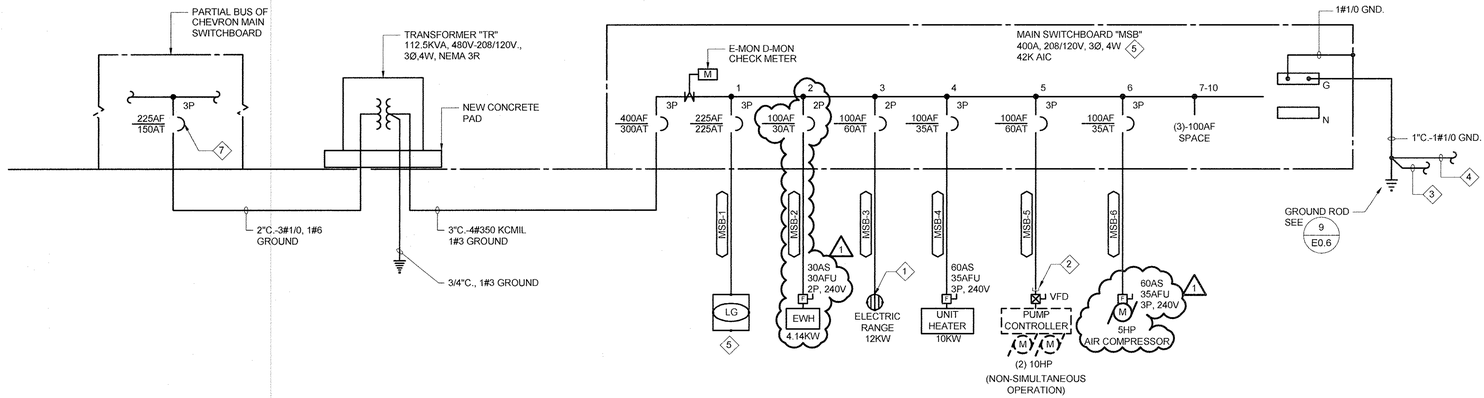
LOCATION: ELECTRICAL ROOM

ENCLOSURE: NEMA-3R — LIFE SAFETY BRANCH — 400 AMP BUS

VOLTAGE: 120/208V,3P,4W — 42,000 AIC SYM, MINIMUM — 300 AMP MAIN CB

FEEDER NUMBER	FEEDER FROM	FEEDER TO	NO. OF SETS	CONDUIT (INCHES)	CONDUCTORS (AWG)	GROUND (AWG)	CONNECTED LOAD AMPS	CONNECTED LOAD KVA	FEEDER LENGTH*	VOLTAGE DROP	REMARKS
MSB-1	MSB	LG	1	2-1/2"	4 #4/0	4	41.98	15.12		0.00%	
MSB-2	MSB	EWH	1	3/4"	2 # 10	10	19.90	4.14			
MSB-3	MSB	ELEC. RANGE	1	1 1/4"	3 #4	8	35.31	12.00			
MSB-4	MSB	UNIT HTR	1	1"	2 #8	10	27.76	10.00			
MSB-5	MSB	FUT. PUMP CONT.	1	2"	(4) #6		30.81	11.10			FUTURE
MSB-6	MSB	AIR COMP.	1	1"	3 #8	10	16.65	6.00			
								58.36		SUBTOTAL	
								8.40		25% OF LARGEST MOTOR	
							185.32	66.76		TOTAL LOAD	

* FEEDER LENGTH IN FEET ARE INDICATED FOR VOLTAGE DROP CALCULATION ONLY AND SHALL NOT BE USED FOR QUANTITY TAKEOFFS.



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EL SEGUNDO LS
SINGLE LINE DIAGRAM

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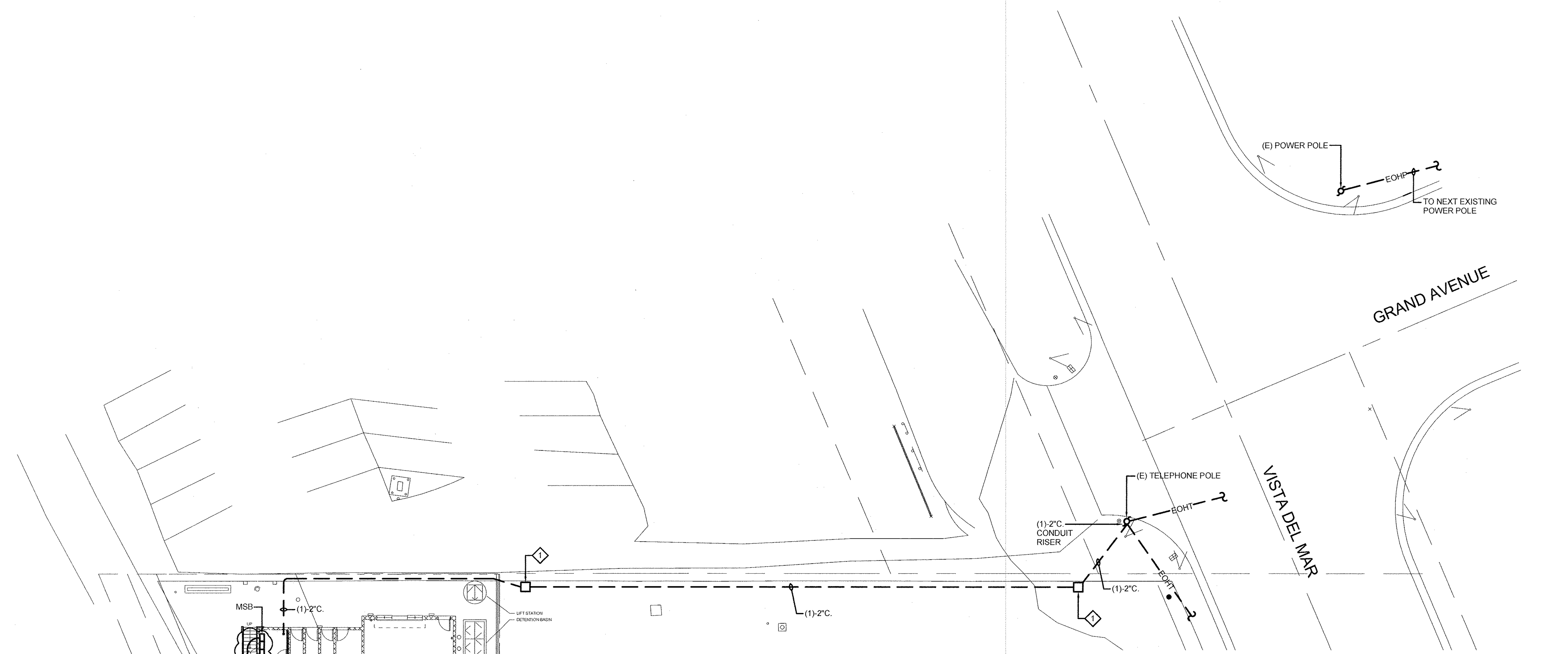
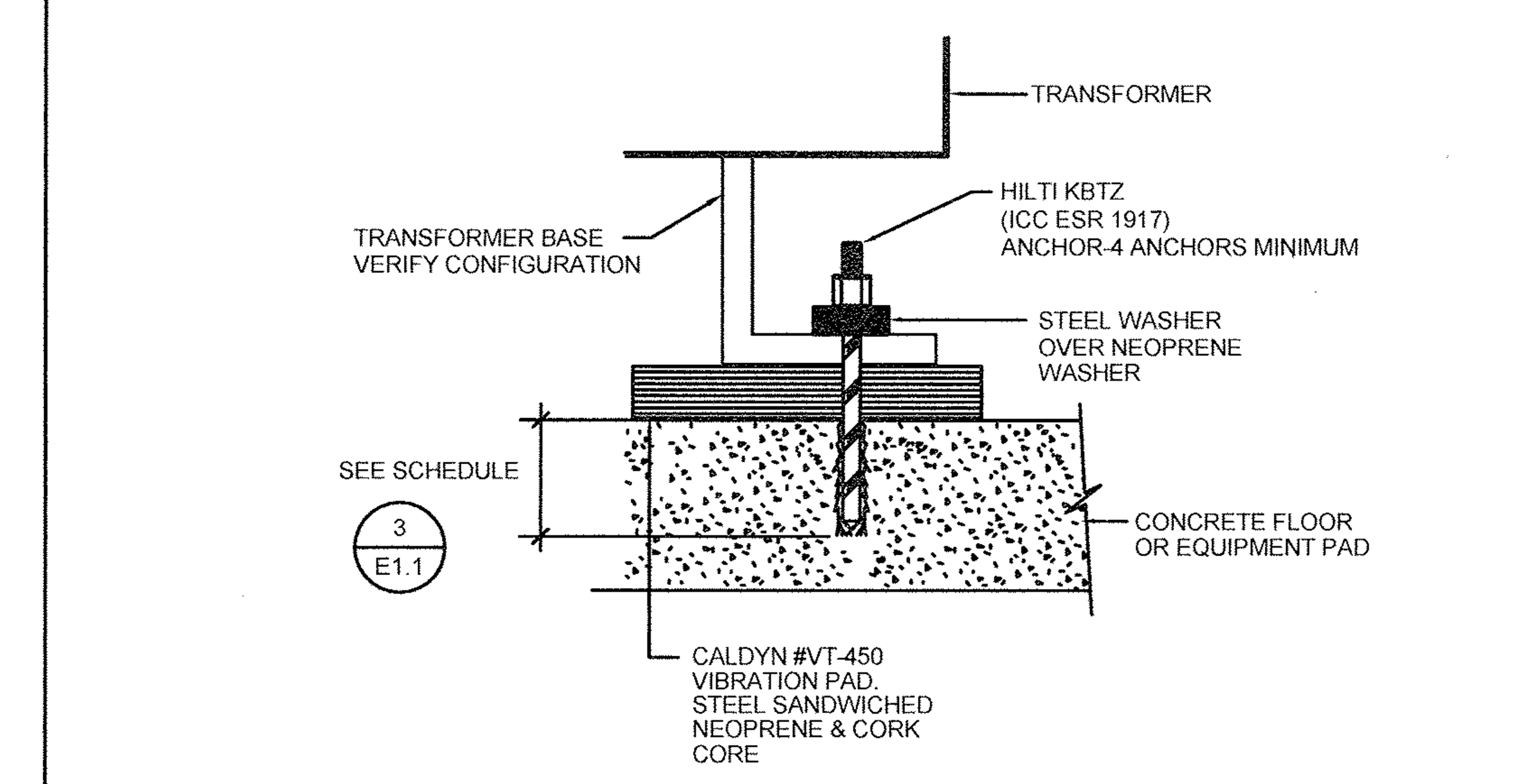


1 POWER SITE PLAN

A-1.1 1/16" = 1'-0"

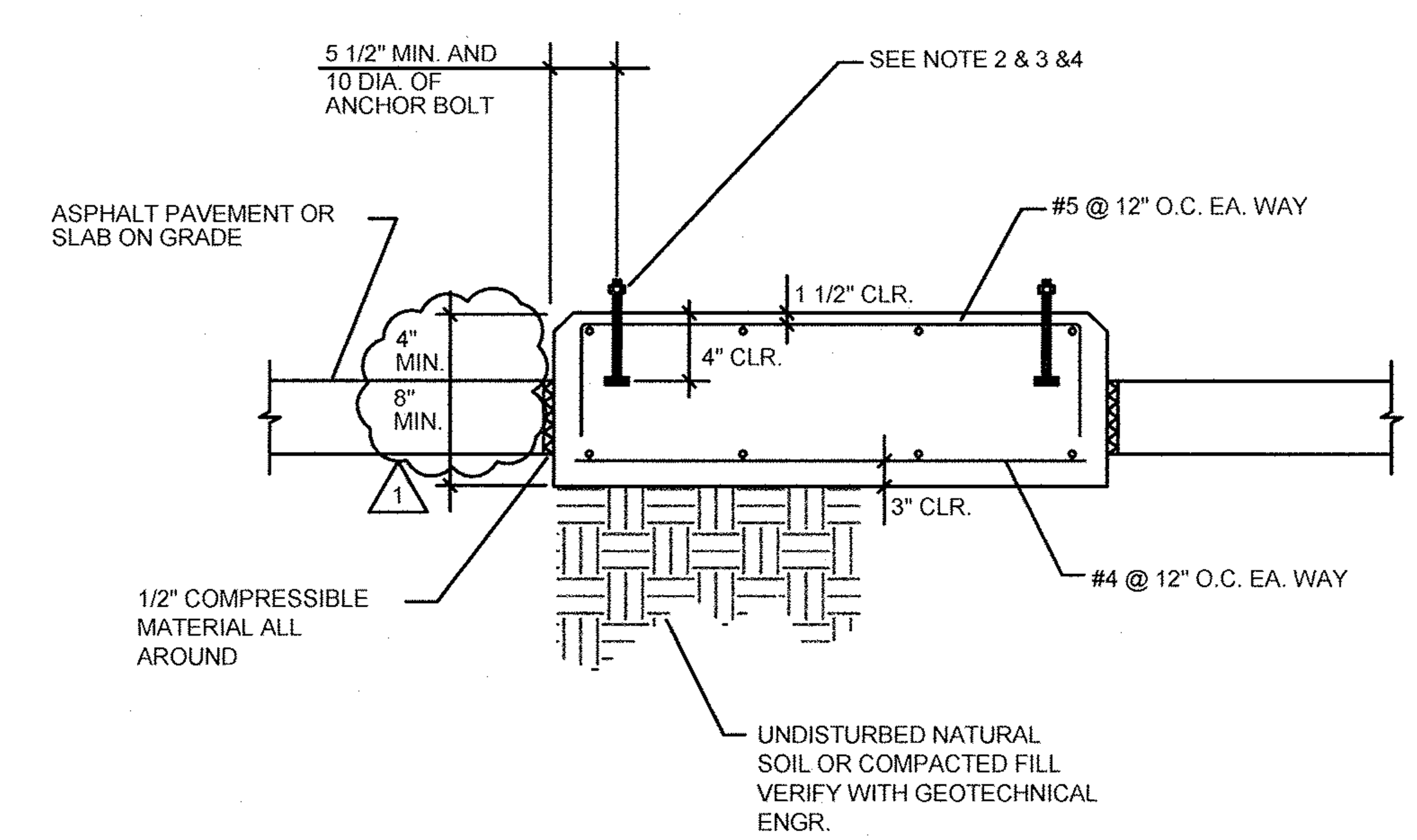
KEY NOTES

1. PROVIDE/INSTALL 2'x3'x3' CONCRETE PULLBOX FOR TELEPHONE SERVICE. COORDINATE WITH TELEPHONE COMPANY, SEE 2/E1.1.
2. PROVIDE/INSTALL 2.5'x3'x5' UNDERGROUND CONCRETE PULLBOX FOR POWER. SEE 2/E1.1.
3. REMOVE EXISTING UNUSED TRANSFORMER. PROVIDE NEW TRANSFORMER ON CONCRETE PAD, SEE 1/E1.1.
4. CONNECT TO CHEVRON'S MAIN SWITCHBOARD. VERIFY EXACT LOCATION OF MAIN SWITCHBOARD IN THE FIELD.
5. SEE SINGLE LINE DIAGRAM ON E-0.5 FOR CONDUIT & WIRE SIZES.



TRANSFORMER MOUNTING DETAIL

NTS 1

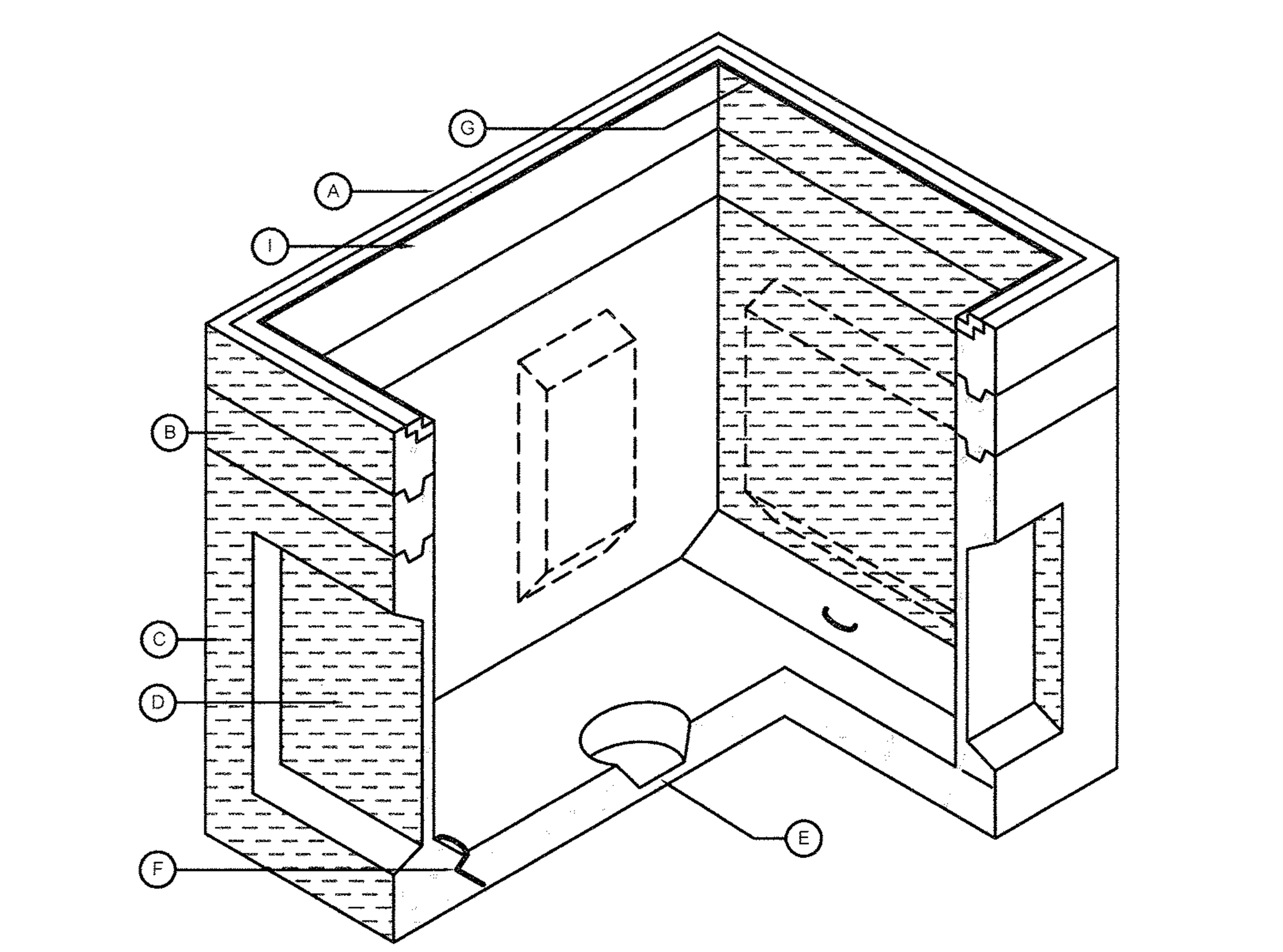


NOTES: COORD. WITH MANUF. FOR THE FOLLOWING:

1. LOCATION AND DIMENSIONS OF PADS.
2. LOCATION AND SIZE OF ANCHOR BOLTS.
3. DETAILS OF SUPPORTS, ISOLATORS OR OTHERS.
4. LOCATION OF RAIL FOOTPRINT AND ANCHORAGE.

CONCRETE EQUIPMENT PAD

NTS 3



- (A) - TOP SECTION
- (B) - EXTENSION SECTION
- (C) - BOTTOM SECTION
- (D) - KNOCKOUT
- (E) - SUMP
- (F) - PULL IRONS
- (G) - ARMOR FRAME
- (I) - TRAFFIC RATED STEEL COVER
- (J) 3/4"Ø x 10'-0" COPPER CLAD GROUND ROD, GROUND ALL EXPOSED METAL PARTS WITH BARE COPPER #6 MINIMUM.

o ASSEMBLY TO BE PLACED ON 12" BASE COMPACTED ROCK TO INSURE UNIFORM DISTRIBUTION OF SOIL PRESSURE ON FLOOR.

UNDERGROUND CONCRETE PULLBOX

NTS 2

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EL SEGUNDO LS
ELECTRICAL SITE PLAN

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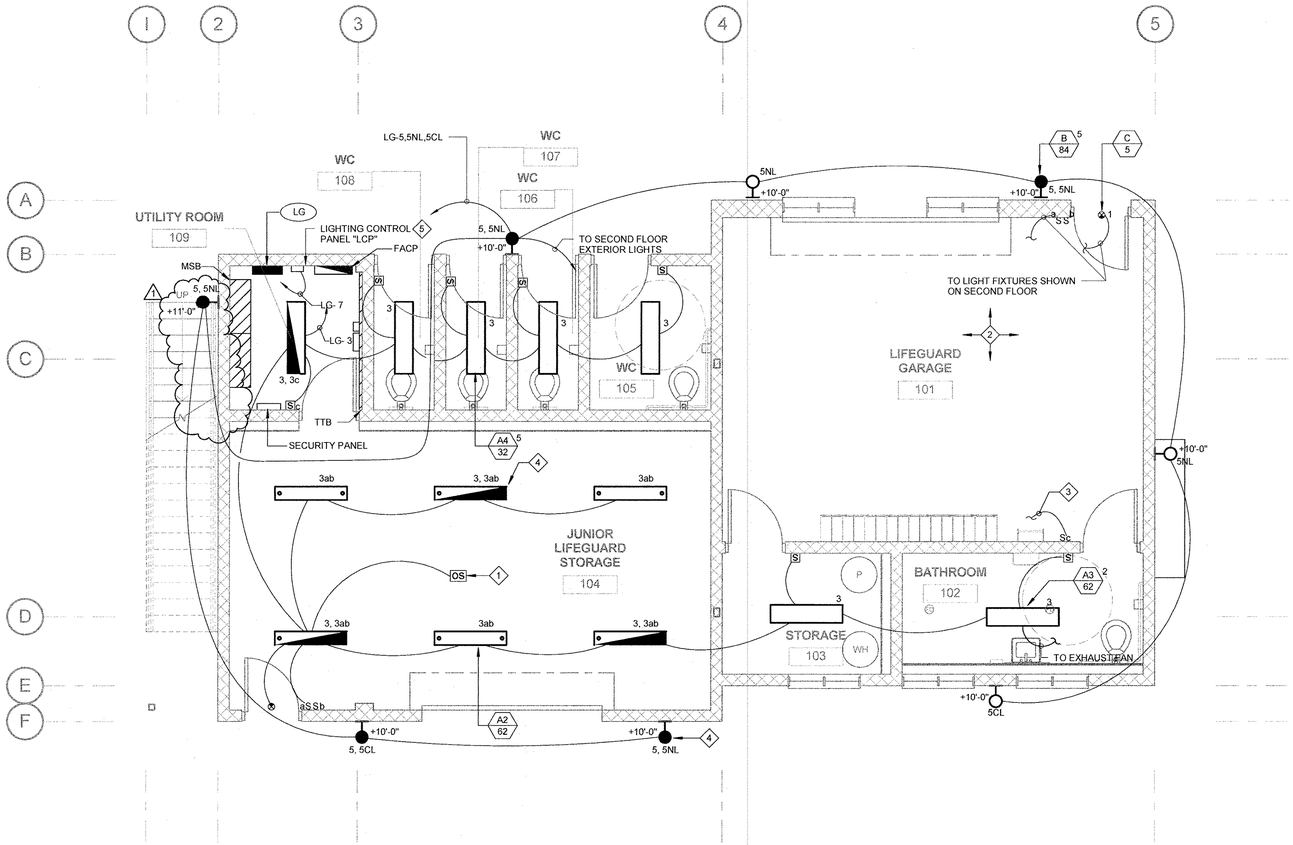

"LCP" NOTES:

1. OPERATION SHALL BE AS FOLLOWS:
   NIGHT LIGHT (NL) = ON BY PHOTOCELL, OFF BY PHOTOCELL
   CURFUEW LIGHT (CL) = ON BY PHOTOCELL, OFF BY TIME SWITCH, (OBTAIN SETTING FROM OWNER)
2. VERIFY MANUFACTURER WIRING REQUIREMENT FOR LUTRON "XPS4-12FT".

KEY NOTES

1. MOUNT ON BOTTOM OF STRUCTURAL BEAM.
2. LIGHTING FIXTURES FOR THIS AREA ARE SHOWN ON SECOND FLOOR, SEE E2.2.
3. UP TO MEZZANINE LIGHT FIXTURES.
4. PROVIDE 90 MINUTE EMERGENCY BATTERY PACK AT ALL SHADED LIGHT FIXTURES, TYPICAL.
5. LIGHTING CONTROL PANEL "LCP" SHALL BE LUTRON "XPS4-12FT

1 GROUND FLOOR LIGHTING PLAN

E-2.1 1/4" = 1'-0"

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GROUND FLOOR LIGHTING PLAN

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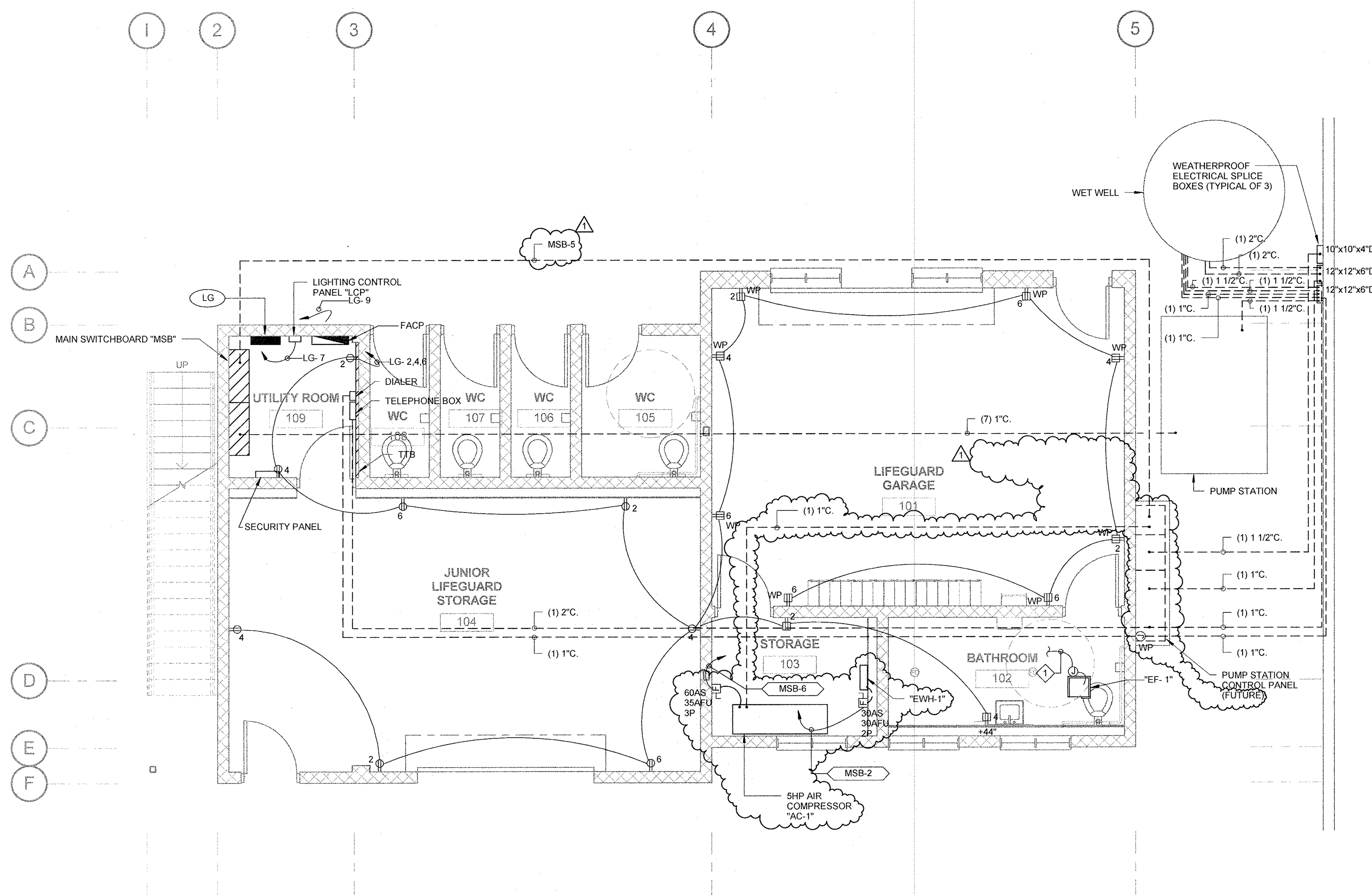
KEY NOTES

1 INTERCONNECT WITH LIGHT SWITCH. SEE SHEET E2.1



1 GROUND FLOOR POWER PLAN

E-3.1 1/4" = 1'-0"

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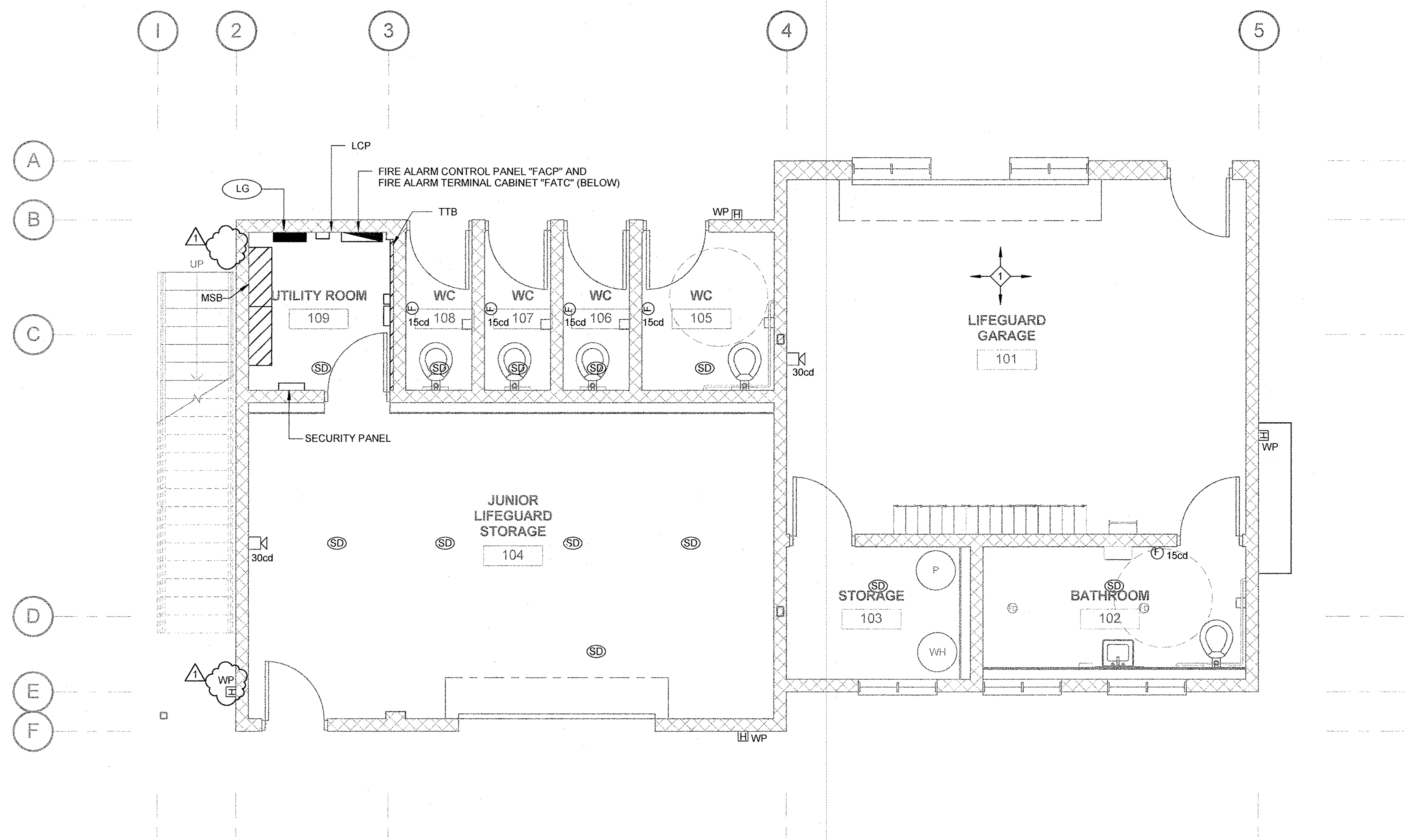
KEY NOTES

1 SMOKE DETECTORS IN THIS ROOM ARE SHOWN ON SECOND FLOOR, SEE E5.2.



1 GROUND FLOOR FIRE ALARM PLAN

E-5.1 1/4" = 1'-0"

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GROUND FLOOR FIRE ALARM PLAN

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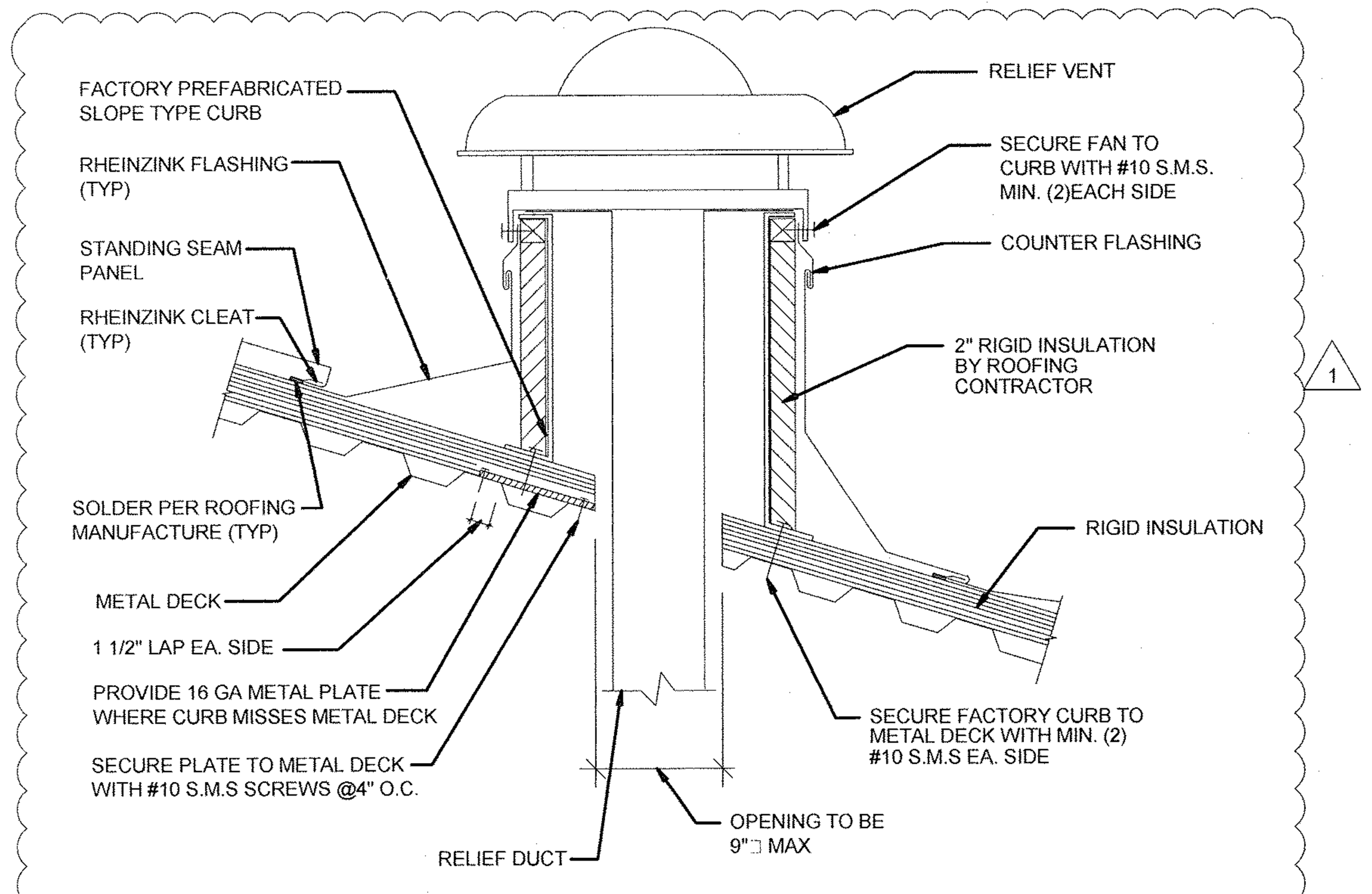
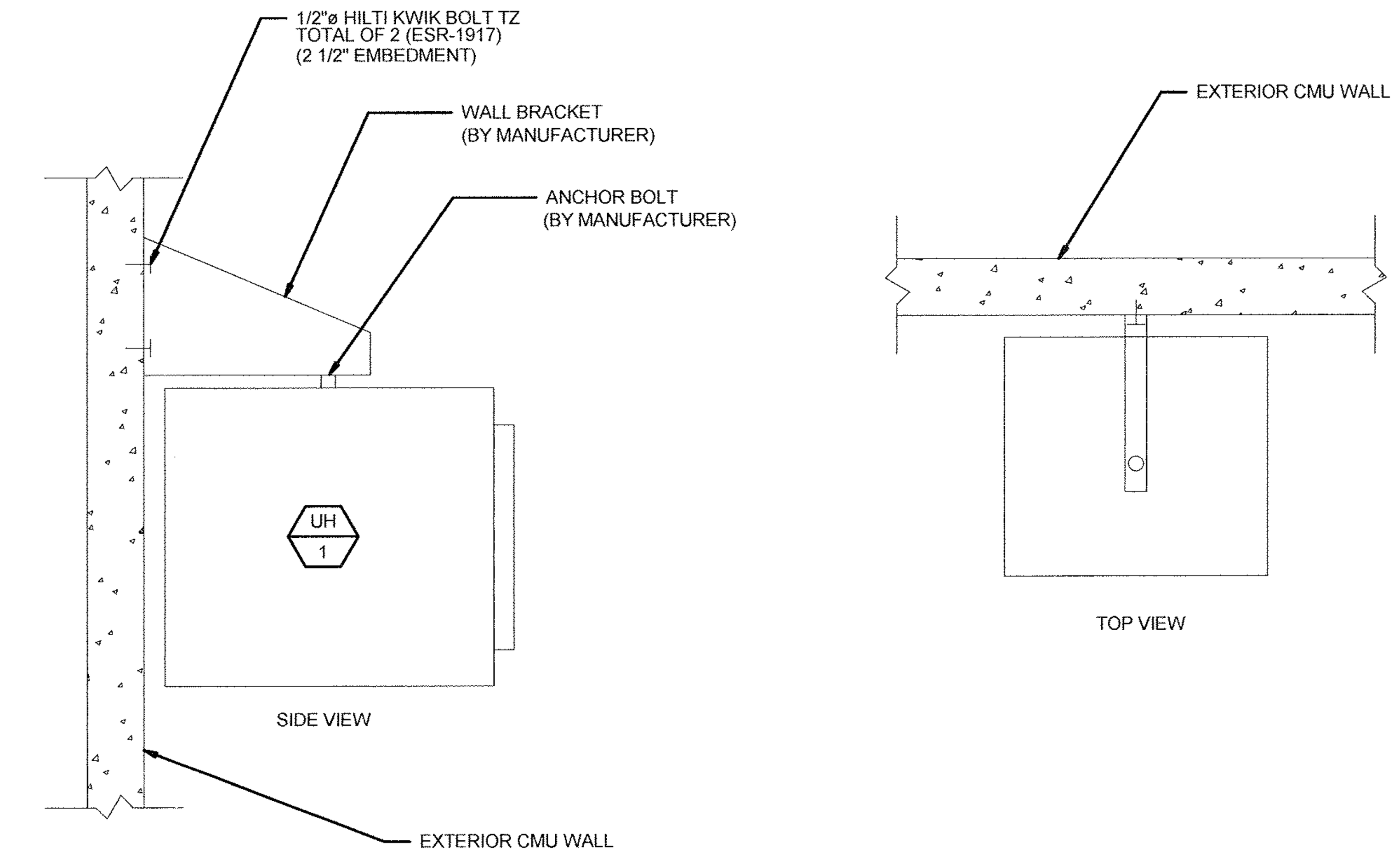


NOTE:
CONTRACTOR TO FOLLOW ROOFING MANUFACTURER'S INSTRUCTIONS

RELIEF VENT MOUNTING DETAIL — NTS 7

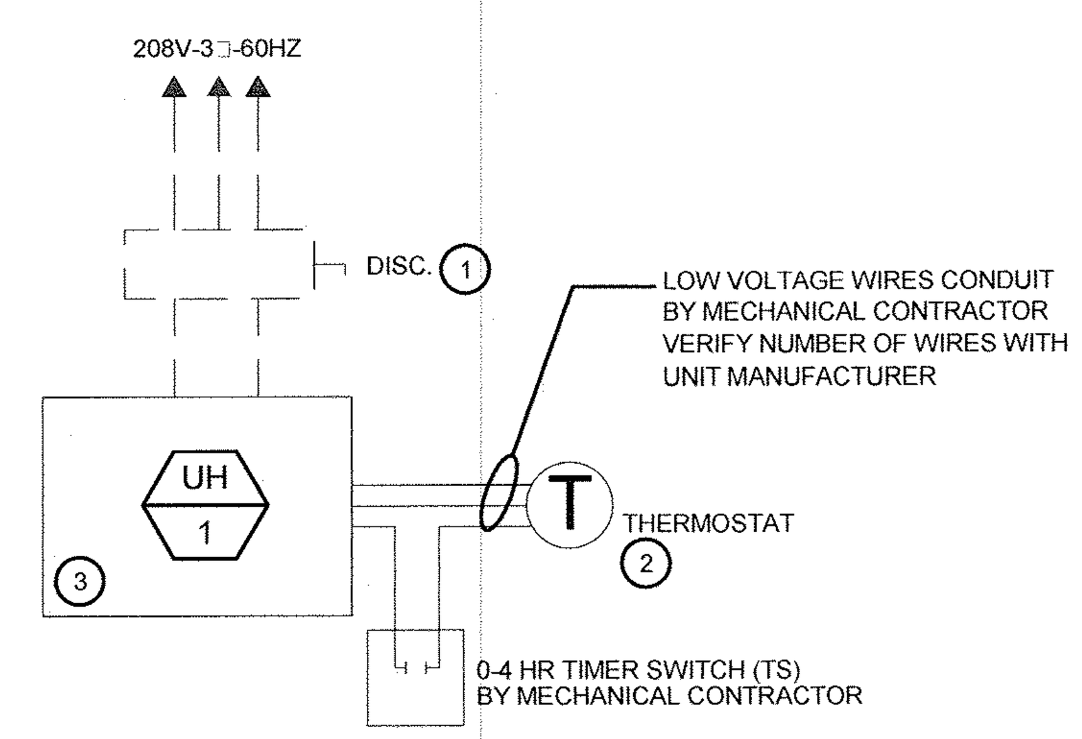
T	THERMOSTAT BY UNIT MANUFACTURER
MS	MAGNETIC STARTER WITH H.O.A. SWITCH INTEGRAL 120V CONTROL POWER TRANSFORMER, 120V HOLDING COIL AND AUXILIARY CONTACTS FURNISHED, INSTALLED AND WIRED BY DIVISION 26 ELECTRICAL.
(dashed box)	EQUIPMENT FURNISHED AND INSTALLED UNDER ELECTRICAL (DIVISION 26).
(solid box)	EQUIPMENT FURNISHED AND INSTALLED UNDER MECHANICAL (DIVISION 23).
(dashed line)	LINE VOLTAGE WIRING AND CONDUIT FURNISHED UNDER ELECTRICAL (DIVISION 26).
(solid line)	LOW VOLTAGE WIRING AND CONDUIT FURNISHED AND INSTALLED UNDER MECHANICAL (DIVISION 23).
DISC	DISCONNECT SWITCH, BY ELECTRICAL.
CB	CIRCUIT BREAKER, BY ELECTRICAL.

CONTROL WIRING LEGEND — NTS 4



UNIT HEATER SUPPORT DETAIL — NTS 1

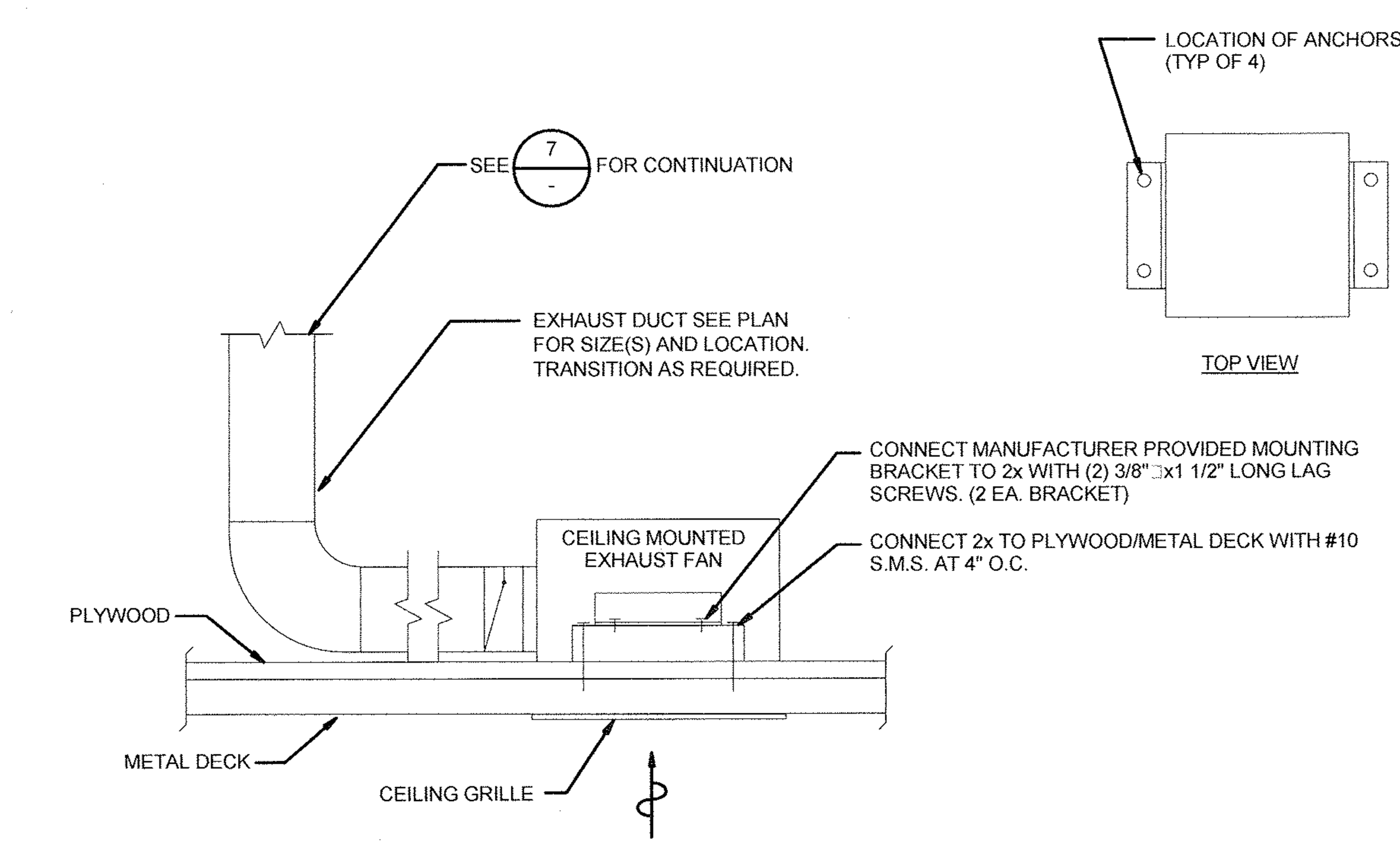
- — NTS 8



DETAIL NOTES:

1. ALL WIRING AND EQUIPMENT SHOWN DASHED SHALL BE FURNISHED AND INSTALLED BY DIVISION 26 - ELECTRICAL. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR COMPLETE DETAILS.
2. THERMOSTAT FURNISHED BY UNIT MANUFACTURER AND INSTALLED BY MECHANICAL CONTRACTOR
3. SEE CONTROL WIRING LEGEND #1 THIS SHEET.

UNIT HEATER CONTROL WIRING DIAGRAM — NTS 5



NOTES:

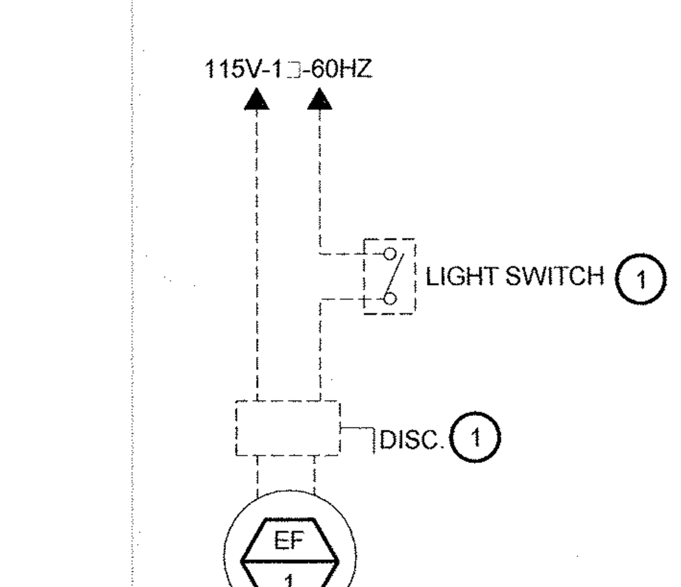
1. ALL EXHAUST OUTLETS SHALL BE 10'-0" FROM ANY OPENINGS OR AIR INTAKES.
2. SEE MANUFACTURER'S INSTALLATION MANUAL FOR ADDITIONAL INFORMATION.

CEILING MOUNTED EXHAUST FAN MOUNTING DETAIL — NTS 2

- — NTS 9

DETAIL NOTES:

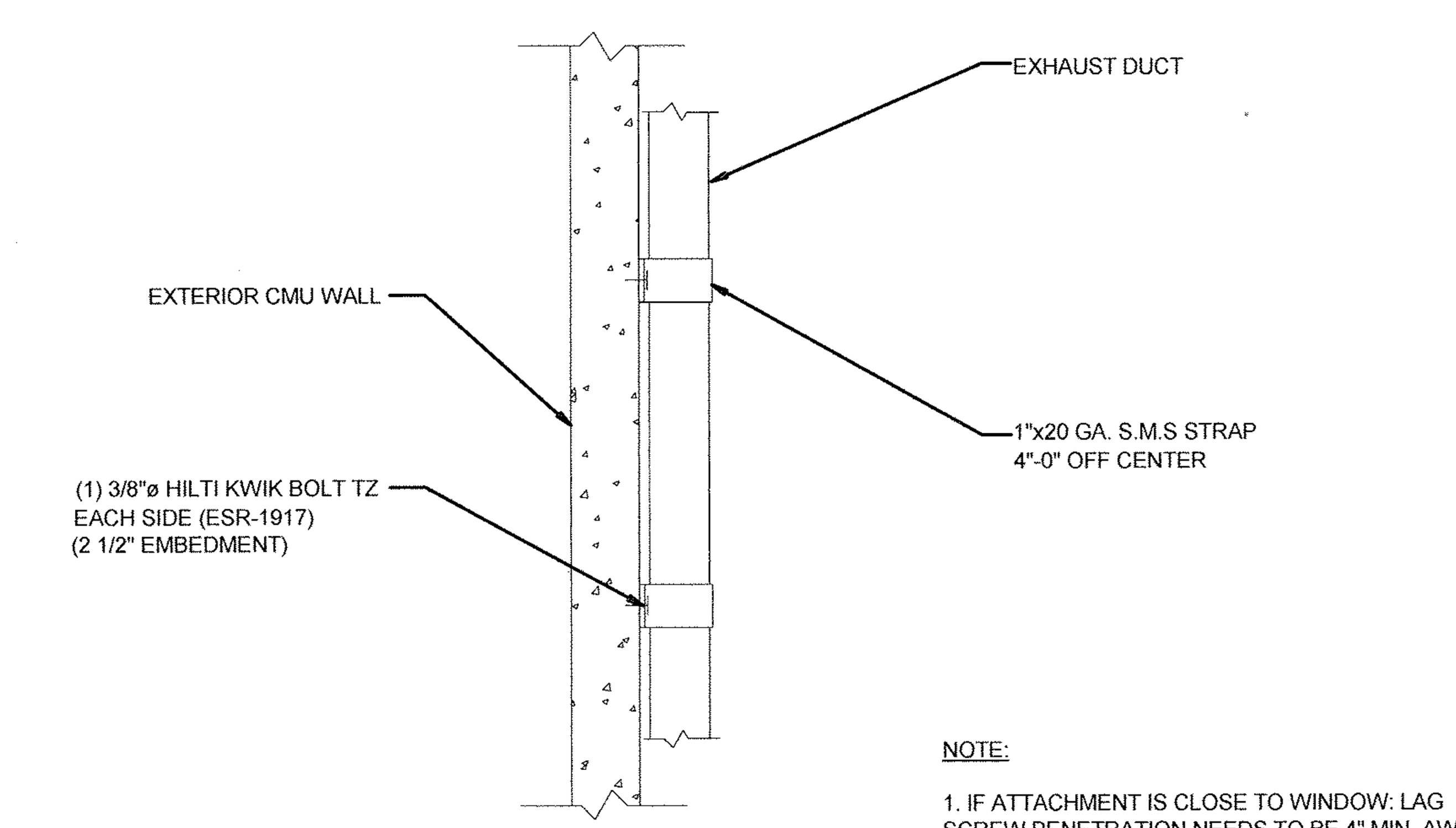
1. ALL WIRING AND EQUIPMENT SHOWN DASHED SHALL BE FURNISHED AND INSTALLED BY DIVISION 26 - ELECTRICAL. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR COMPLETE DETAILS.
2. SEE CONTROL WIRING LEGEND #1 THIS SHEET.



SINGLE PHASE EXHAUST FANS TO LIGHT SWITCH TYP. FOR EF-1

2

EXHAUST FAN CONTROL WIRING DIAGRAM — NTS 6



NOTE:
1. IF ATTACHMENT IS CLOSE TO WINDOW: LAG SCREW PENETRATION NEEDS TO BE 4" MIN. AWAY FROM OPENING.

DUCT WALL SUPPORT — NTS 3

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DOMESTIC WATER FIXTURE UNIT LOADS

BUILDING

FIXTURE	QUANTITY	FIXTURE UNITS REQUIRED EA. CW	FIXTURE UNITS REQUIRED EA. HW	FIXTURE UNIT TOTAL CW	FIXTURE UNIT TOTAL HW
WATER CLOSET	5	5	-	25	-
EXTERIOR LAVATORY	3	1	-	3	-
EXTERIOR SHOWER	3	2	-	6	-
LAVATORY	1	1	1	1	1
SHOWER	1	2	2	2	2
HOSE BIBB	3	2.5+1	-	4.5	-
TOTAL				41.5	3

(FLUSH VALVE FIXTURE UNITS)

HYDRAULIC WATER CALCULATION

TOTAL DEMAND (GPM): 41.5 FU = 47 GPM
BLDG. SERVICE SIZE: 2"
MINIMUM PRESSURE NEEDED AT BUILDING 36.37 PSI

PRESSURE LOSSES: 36.37
LOSS DUE TO BLDG. HEIGHT: HEIGHT (FT.) 5 x 0.433: 2.17 - 2.17
34.20
PRESSURE REQUIRED AT FIXTURE: FLUSH VALVE = 30 PSI - 30
OTHER LOSSES: - NA

REMAINING PRESSURE AVAILABLE (PSI) 4.20

PRESSURE AVAILABLE FOR FRICTION LOSS (PSI)

AVAILABLE PSI: 4.20 / LENGTH OF PIPE RUN+50% FOR FITTINGS: 140 * 100 = PSI/100 FT. 3

DOMESTIC COLD WATER SIZING

PIPE SIZE	FLOW RATE (GPM)	VELOCITY (FT/SEC.)	FIXTURE UNITS FLUSH TANK	FIXTURE UNITS FLUSH VALVE
1/2"	2.02	2.78	1	-
3/4"	5.28	3.50	6	-
1"	10.64	4.14	13	-
1 1/4"	18.51	4.73	26	-
1 1/2"	29.23	5.27	51	12
2"	57.88	6.0	160	66
2 1/2"	89.25	6.0	320	190
3"	127.40	6.0	516	409
4"	223.99	6.0	1018	1009
6"	501.83	6.0	1018	1009

PIPE MATERIAL: TYPE L COPPER
MAXIMUM ACCEPTABLE PRESSURE LOSS: 3.0 PSI/100 FT.
MAXIMUM ACCEPTABLE VELOCITY: 6 FT./SEC.

DOMESTIC HOT WATER SIZING

PIPE SIZE	FLOW RATE (GPM)	VELOCITY (FT/SEC.)	FIXTURE UNITS FLUSH TANK	FIXTURE UNITS FLUSH VALVE
1/2"	2.02	2.78	1	-
3/4"	5.28	3.50	6	-
1"	10.29	4.0	13	-
1 1/4"	15.67	4.0	21	-
1 1/2"	22.18	4.0	34	-
2"	38.59	4.0	78	-
2 1/2"	59.50	4.0	170	-
3"	84.93	4.0	294	-

PIPE MATERIAL: TYPE L COPPER
MAXIMUM ACCEPTABLE PRESSURE LOSS: 3.0 PSI/100 FT.
MAXIMUM ACCEPTABLE VELOCITY: 4 FT./SEC.

PLUMBING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	W	TRAP	V	CW	HW	REMARKS
WC 1	WATER CLOSET (STANDARD)	4"	INT.	2"	1 1/2"	-	ACORN PENAL-WARE 1680 SERIES, MODEL NUMBER 1680-W-1-ULF-FVBO-SW, WALL MOUNTED, TYPE 304 STAINLESS STEEL, EXTERIOR POLISHED TO A SATIN FINISH, ELONGATED BOWL, HYDRAULIC FLUSH VALVE. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS. ALL SCREWS, BOLTS, AND WASHERS SHALL BE OF CORROSION RESISTANCE LISTED TYPE.
WC 2	WATER CLOSET (ACCESSIBLE)	4"	INT.	2"	1 1/2"	-	ACORN PENAL-WARE 1680, SERIES MODEL NUMBER 1680-W-1-ULF-FVBO-ADA-SW, WALL MOUNTED, TYPE 304 STAINLESS STEEL, EXTERIOR POLISHED TO A SATIN FINISH, ELONGATED BOWL, HYDRAULIC FLUSH VALVE. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS. ALL SCREWS, BOLTS, AND WASHERS SHALL BE OF CORROSION RESISTANCE LISTED TYPE.
WC 3	WATER CLOSET (ACCESSIBLE)	4"	INT.	2"	1 1/2"	-	AMERICAN STANDARD AFWALL, ELONGATED FLUSH VALVE, MODEL NUMBER 2257.103, WALL MOUNTED, VITREOUS CHINA, ELONGATED BOWL, WITH OLSONITE #95CT OPEN FRONT SEAT. BATTERY POWERED SLOAN FLUSH VALVE G2 ROYAL II MODEL NO. 111. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS. ALL SCREWS, BOLTS, AND WASHERS SHALL BE OF CORROSION RESISTANCE LISTED TYPE.
L 1	LAVATORY (ACCESSIBLE)	2"	1 1/2"	1 1/2"	1/2"	-	ACORN PENAL-WARE ,1652FA SERIES, MODEL NUMBER 1652-ADA-FA-1-LF-3-M-OF, WALL HUNG, 14 3/4"x 9 1/2" X 4 1/2"DEEP, T YPE 304 STAINLESS STEEL, EXPOSED SURFACE POLISHED TO A SATIN FINISH, WITH STANDARD P-TRAP WASTE OUTLET, BUBBLER, PUSH BUTTON VALVE USING ATMOSPHERIC AIR, VALVE IS METERING. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
L 2	LAVATORY (ACCESSIBLE)	2"	1 1/2"	1 1/2"	1/2"	1/2"	AMERICAN STANDARD, LUCERNE, MODEL NUMBER 0355.012, WALL HUNG, 20"x18" VITREOUS CHINA BOWL. AMERICAN STANDARD DRAIN MODEL NO. 2411.015. CHICAGO FAUCET MODEL NO. 2200-4E2805CP. LA PATTERN P-TRAP WITH ACCESSIBLE INSULATION WRAP BY PLUMBEREX "HANDY SHIELD MAXX" MODEL NO. 2003. MEETS AST E84-07 TESTING STANDARD 25 FLAME SPREAD/450 SMOKE INDEX. CHICAGO SUPPLY & STOPS MODEL NO. 1017CR. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
SH 1	SHOWER (ACCESSIBLE)	-	-	-	3/4"	3/4"	ACORN, PENAL-WARE 1741FA SERIES, MODEL NO. 1741-3-F, PUSHBUTTON PANEL IS 14 GAGE, TYPE 304 STAINLESS STEEL, EXTERIOR SURFACE POLISHED TO A SATIN FINISH, SHOWER HEAD AND PUSHBUTTON ESCUTCHEON ARE CHROME PLATED BRASS, PUSH BUTTON VALVE USING ATMOSPHERIC AIR, VALVE IS METERING. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
SH 2	SHOWER (ACCESSIBLE)	-	-	-	3/4"	3/4"	SYMMONS, SAFETYMIX PRESSURE BALANCING MIXING VALVE, MODEL NO. 1-25-FSB-X, INLET STOPS, LEVEL HANDLE, STANDARD ALL BRASS SUPER FLOW SHOWER HEAD WITH 2.5 GPM FLOW RESTRICTOR. DELUXE ARM AND FLANGE, FD-1 DRAIN. LESS TRAP PRIMER. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
HB 1	HOSE BIBB (INTERIOR)	-	-	-	3/4"	-	ACORN, MODEL NUMBER 8151. RECESSED WALL HOSE BOX WITH VACUUM BREAKER. 18 GA. STAINLESS STEEL BOX. 16 GA. FLANGE WITH POLISHED NO.4 SATIN FINISH. CARTRIDGE OPERATED, VANDAL RESISTANT LOCKSHIELD VALVE, SCREWDRIVER STOP. 16 GA. SATIN FINISH DOOR WITH CYLINDER LOCK.
HB 2	HOSE BIBB (EXTERIOR)	-	-	-	3/4"	-	ACORN MODEL # 8104. RECESSED WALL HOSE BOX WITH VACUUM BREAKER. LUMALOY BOX AND FRAME. REMOVABLE WALL FLANGE. FRAME DOOR WITH ANODIZED, SATIN FINISH. DOOR WITH CAM LATCH, CARTRIDGE OPERATED VALVE. SCREWSRIVER STOP. VANDAL RESISTANT LOCKSHIELD BONNET.
FD 1	FLOOR DRAIN	2"	2"	2"	-	-	J.R. SMITH MODEL NO. 2005–A, DUCO CAST BODY, ROUND NICKEL–BRONZE HEEL PROOF ADJUSTABLE 6" STRAINER GRATE WITH DOUBLE DRAINAGE FLANGE, WEEP HOLES, 2" HUBLESS. PROVIDE WITH TRAP PRIMER CONNECTION.

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	REMARKS
EWH 1	ELECTRIC WATER HEATER	STIEBEL ELTRON , TANKLESS ELECTRIC, MODEL NUMBER 223422, 4.14 KW, 208 V, 1 PH, 60 HZ, 66°F RECOVERY GALLONS PER HOUR. 16 5/8"x 14 1/2"x 4 5/8" DEEP.
WHA 1	WATER HAMMER ARRESTOR	PRECISION PLUMBING PRODUCTS. SC OR SWA SERIES. NOTE: INSTALL AT EACH PLUMBING FIXTURE OR BATTERY OF PLUMBING FIXTURES. INSTALL ON BOTH HOT AND COLD WATER BRANCH LINES IN AN UP RIGHT POSITION AS CLOSE AS POSSIBLE TO THE VALVE OR VALVES BEING SERVED. SIZE AND LOCATION PER P.D.I. STANDARD WH-201.
TP 1	AUTOMATIC TRAP PRIMER	PRECISION PLUMBING PRODUCTS "PPP" MODEL #P2-500 AND MODEL #DU-2 DISTRIBUTION BOX AS REQUIRED FOR MULTIPLE FLOOR DRAIN APPLICATIONS. TRAP PRIMER SHALL BE CONSTRUCTED OF CORROSION RESISTANT BRASS. PROVIDE AND INSTALL 1/2" COPPER PIPE FROM UNIT TO FLOOR DRAIN, ISOLATION VALVE AND ACCESS PANEL. TRAP PRIMER TO TAP OFF OF RECLAIMED WATER LINES ONLY.
AC 1	AIR COMPPRESOR AND TANK	SULLAIR "SHOPTEK" MODEL NO. ST-410, ELECTRIC DRIVEN, SINGLE STAGE, LUBRICATED, ROTARY SCREW COMPRESSOR TOTAL PACKAGE INCLUDES: INLET AIR FILTER, PRESSURE RELIEF, FLUID LEVEL SIGHT GLASS, AIR/FLUID SEPARATOR, CHECK VALVE, BELT DRIVE, COLLING FUBRICATING SYSTEM, DRAIN VALVE, 2 GALLON ASME RECEIVER, AND BELT GUARDS; 5HP, 208V, 3Ø.
AO 1	AIR OUTLET	"ARO" MODEL NO. 210, PART NO. ARCF22, FEMALE COUPLER, 1/4" BODY SIZE, 18CFM WITH "ARO" AIR 2000 PIGGYBACK FILTER/REGULATOR PART NO. P29221-614, GAUGE, FILTER WITH METAL BOWL AND SIGHT GLASS, 93 CFM, 1/4" PORT SIZE.
AL 1	AIR LINE	GRAINGER MODEL NO. PR14-10B-B, COILHOSE PNEUMATICS AIR HOSE, SWIVEL, 1/4" ID, 10 FOOT, BLUE.

PIPE MATERIAL SCHEDULE

SERVICE	MATERIAL	CAST IRON PIPE / FITTINGS CISPI 301, SERVICE WEIGHT	COPPER TYPE "K" ASTM B88 FITTINGS ASME B16.18	COPPER TYPE "L" ASTM B88 FITTINGS ASME B16.18	COPPER TYPE "L" ASTM B819 FITTINGS ASME B16.18	PEX-AL-PEX ASTM F1281	BLACK STEEL SCHEDULE 40 ASTM A53 FITTINGS ANSI B16.3	BLACK STEEL SCHEDULE 10 ASTM A795 FITTINGS ANSI B16.4	BLACK STEEL ASTM A53 SCHEDULE 40 VICTAULIC COUPLINGS	GALV. STEEL SCHEDULE 40 VICTAULIC COUPLINGS	POLYETHYLENE ASTM D2513 SDR11.5 FITTINGS ASTM D2683 OR ASTM D2513	CAST IRON ANSI/AWWA C151 FITTINGS ANSI/AWWA C110 JOINTS ANSI/AWWA C111	SCHEDULE 40 ABS ASTM D2751, SDR 35 / FITTINGS SOLVENT WELD ABS ASTM D2751	REMARKS
WATER (CW) (HW)	ABV. GR.			●										95/5 SOLDER, GRADE 95TA. LEAD FREE.
	BEL. GR.		●											
WASTE/SOIL AND VENT	ABV. GR.	●												
	BEL. GR.	●												

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10/06/2010
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JOB NO. 1109531

FILE NO. ____

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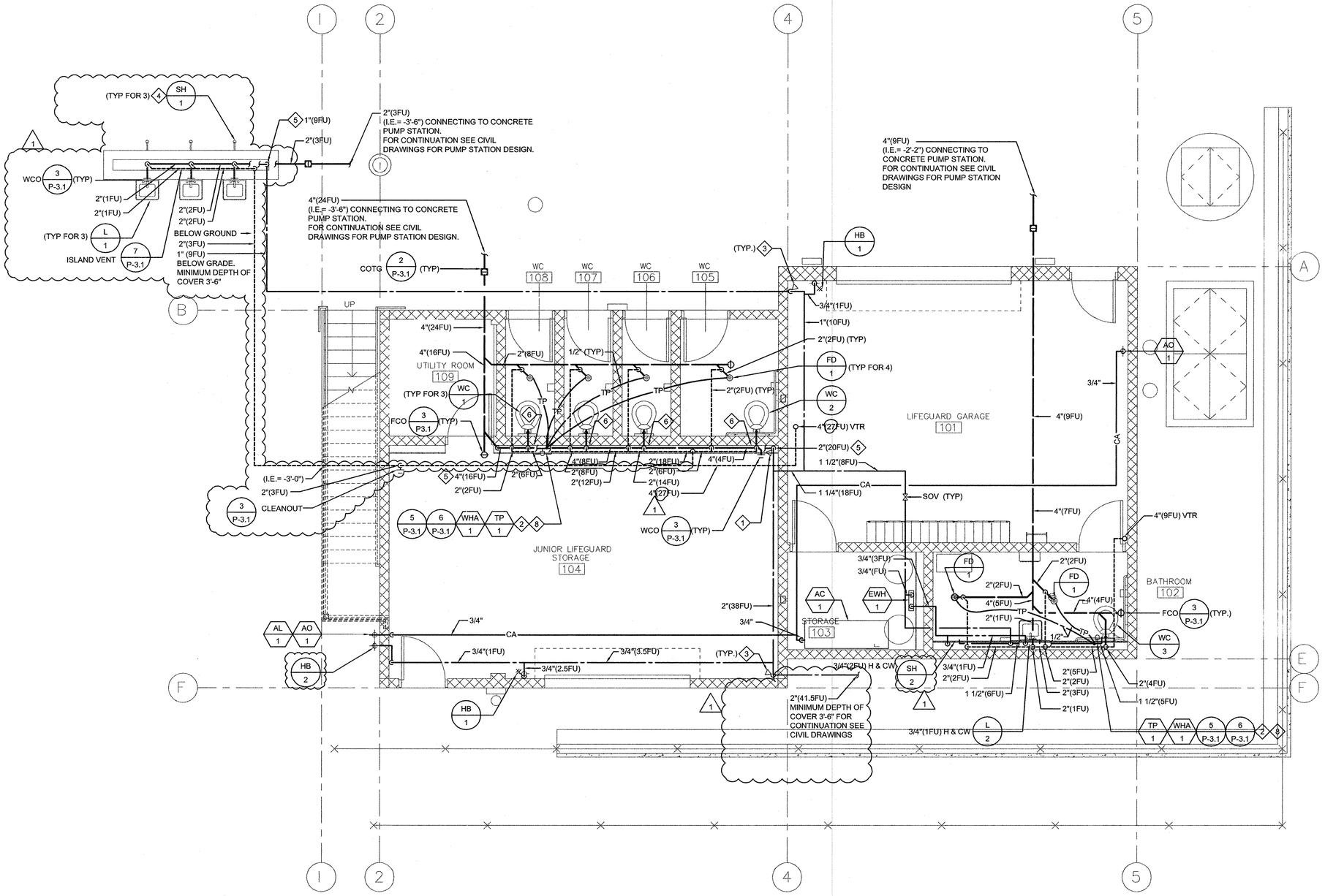

KEY NOTES

1. PROVIDE A SHUT-OFF VALVE IN THE VERTICAL SUPPLY BEHIND AN ACCESS PANEL.
2. PROVIDE A COMMON ACCESS PANEL IN JUNIOR LIFEGUARD STORAGE TO ACCESS WATER HAMMER ARRESTOR AND TRAP PRIMER.
3. PROVIDE AN EXPOSED SHUT-OFF VALVE IN THE VERTICAL SUPPLY.
4. PROVIDE ACCESS PANEL ABOVE LAVATORIES TO ACCESS SHOWER VALVES.
5. PROVIDE A FULL SIZED HEADER TO ALL FIXTURES.
6. PROVIDE ACCESS PANELS IN THE JUNIOR LIFEGUARD STORAGE 104 FOR EACH WATER CLOSET TO PROVIDE ACCESS TO THE CONCEALED FLUSHVALVES AND PROVIDE OPENINGS IN THE BLOCK WALL FOR THE INSTALLATION OF THE MANUAL ACTIVATION OF THE WATER CLOSETS.

1 FLOOR PLAN

P-2.1 1/4" = 1'-0"

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PLUMBING GROUND FLOOR PLAN

P-2.1
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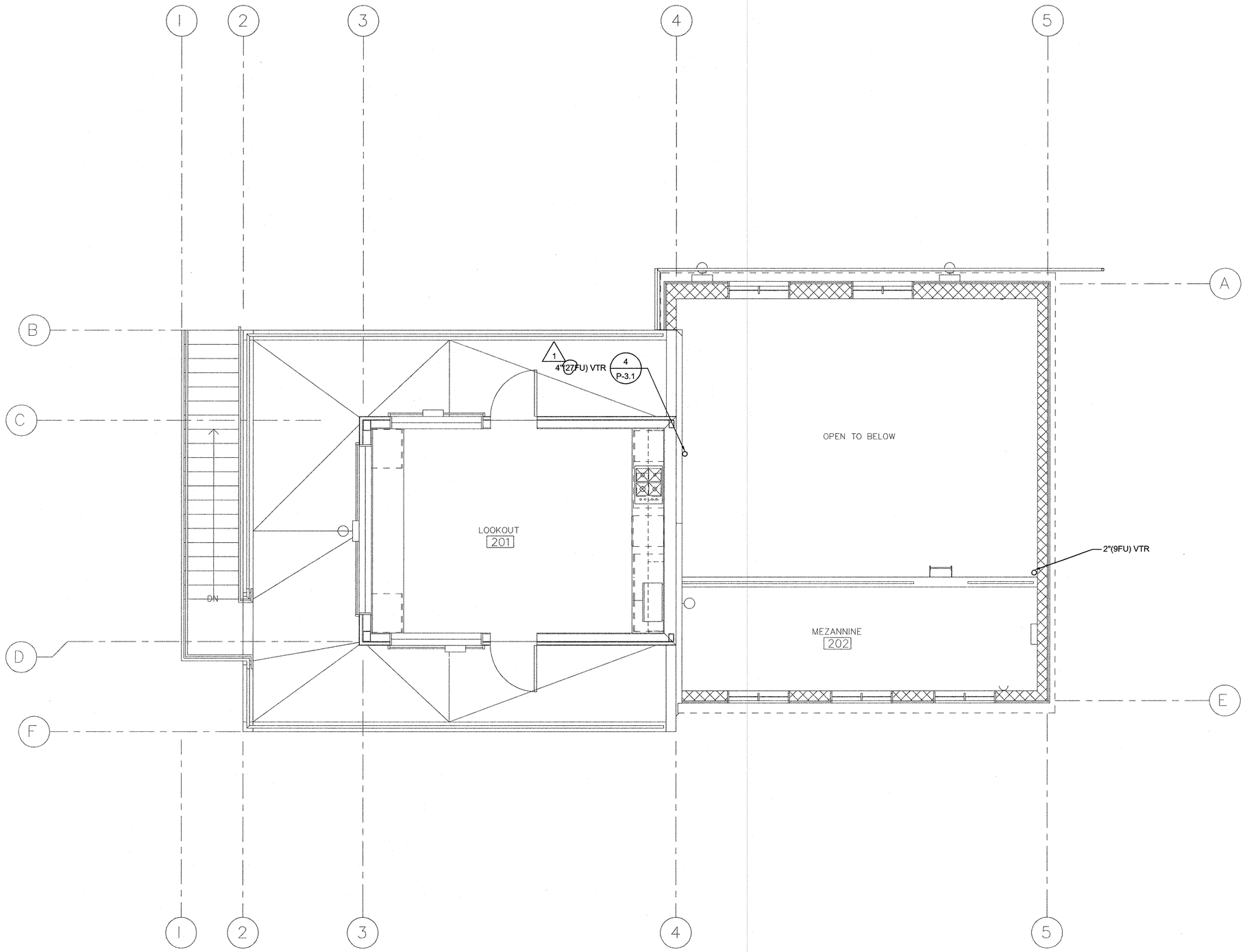

1 SECOND FLOOR PLAN
P-2.2 1/4" = 1'-0"

KEY NOTES◈

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EL SEGUNDO LS
PLUMBING SECOND FLOOR PLAN

P-2.2
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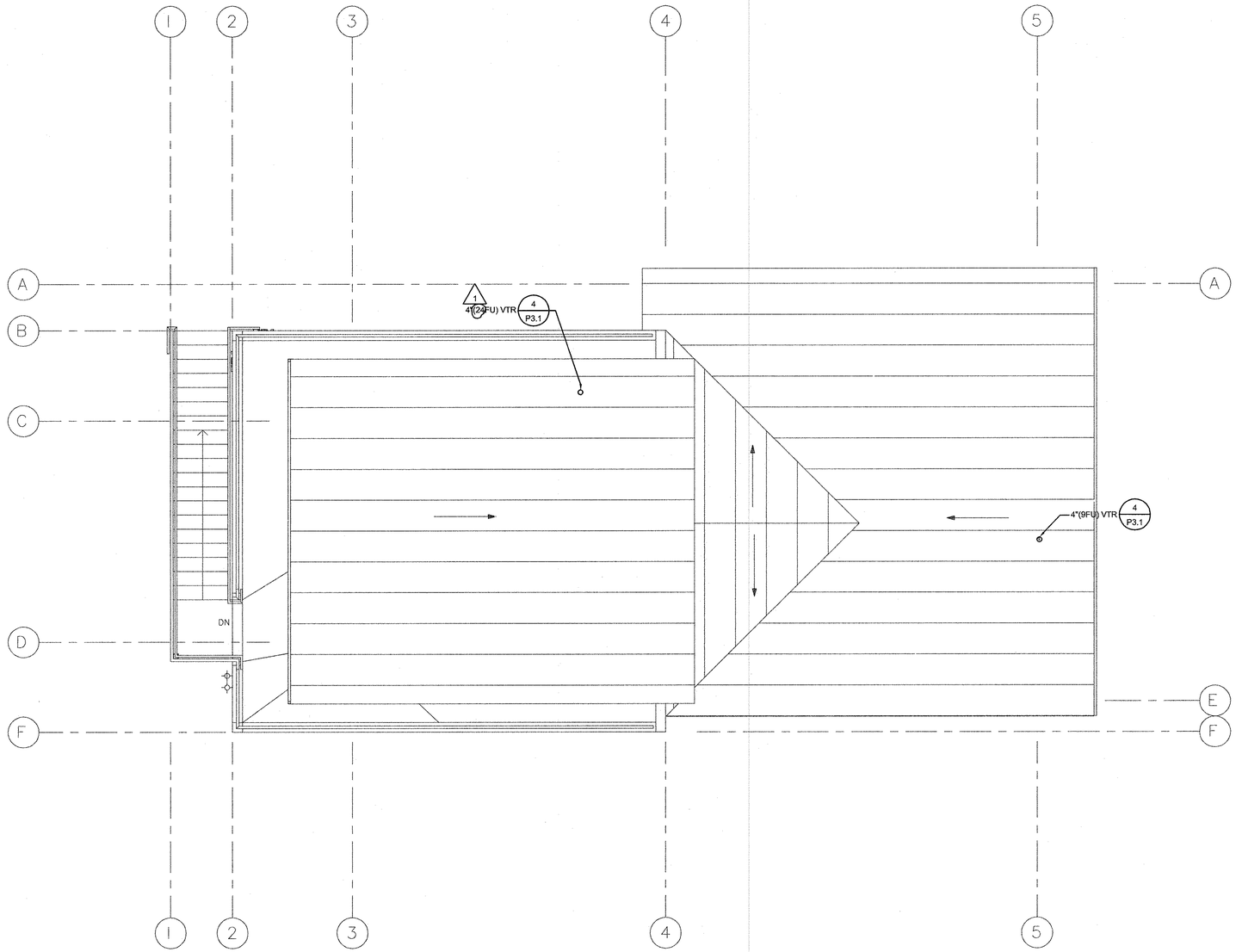
KEY NOTES



1 ROOF PLAN
P-2.3 1/4" = 1'-0"

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PLUMBING ROOF PLAN

P-2.3
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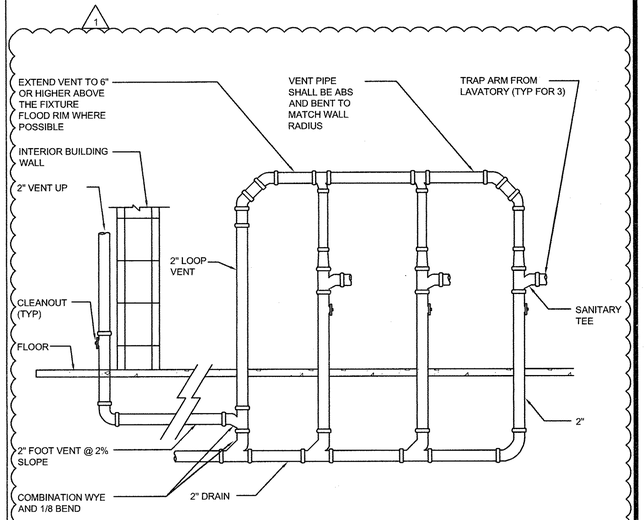
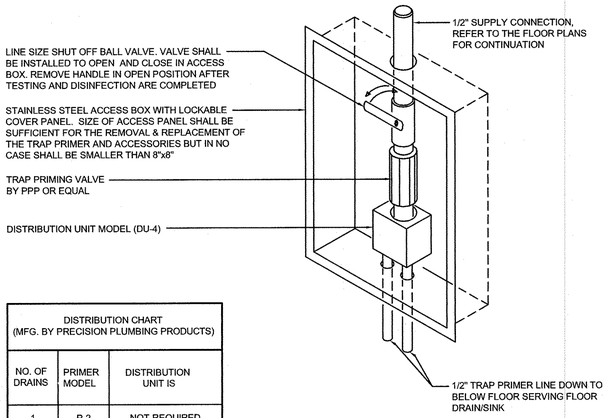


ISLAND DETAIL

NTS | 7



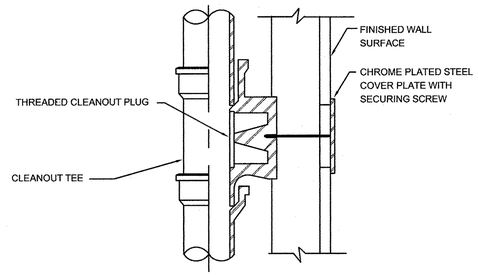
DISTRIBUTION CHART (MFG. BY PRECISION PLUMBING PRODUCTS)		
NO. OF DRAINS	PRIMER MODEL	DISTRIBUTION UNIT IS
1	P-2	NOT REQUIRED
2	P-2	DU-4
3	P-1	DU-4
4	P-1	DU-4

NOTE:

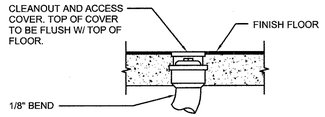
GROUP VALVES AND SIMILAR EQUIPMENT IN COMMON ACCESS PANELS WHEN APPLICABLE. ALL ITEMS SHALL BE FULLY OPERATIONAL AND SERVICEABLE.

TRAP PRIMER IN ACCESS BOX

NTS | 5



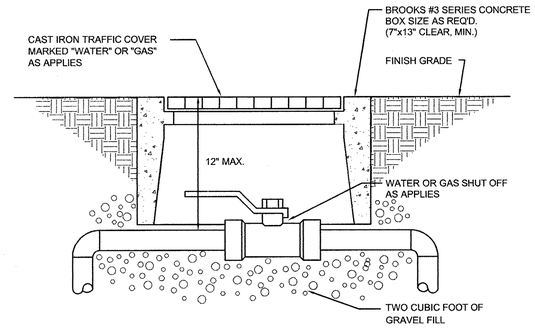
WALL CLEANOUT



FLOOR CLEANOUT

WALL AND FLOOR CLEANOUT

NTS | 3

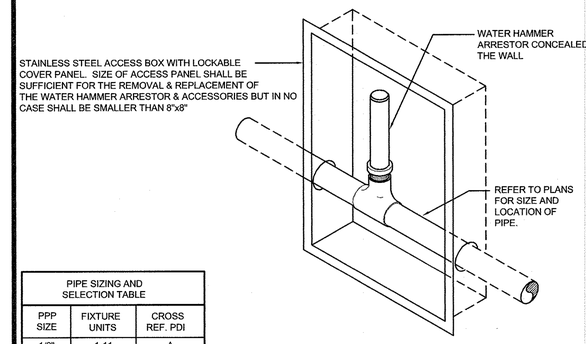


NOTE:

SHUT OFF VALVE SHALL BE RATED FOR SERVICES CONNECTED.

EXTERIOR SHUT OFF VALVE IN YARD BOX

NTS | 1



PIPE SIZING AND SELECTION TABLE		
PPP SIZE	FIXTURE UNITS	CROSS REF. PDI
1/2"	1-11	A
3/4"	12-32	B
1"	33-60	C
1 1/4"	61-113	D
1 1/2"	114-154	E
2"	155-330	F

NOTE:

GROUP VALVES AND SIMILAR EQUIPMENT IN COMMON ACCESS PANELS WHEN APPLICABLE. ALL ITEMS SHALL BE FULLY OPERATIONAL AND SERVICEABLE.

FINAL SIZING AND MODEL SELECTION SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

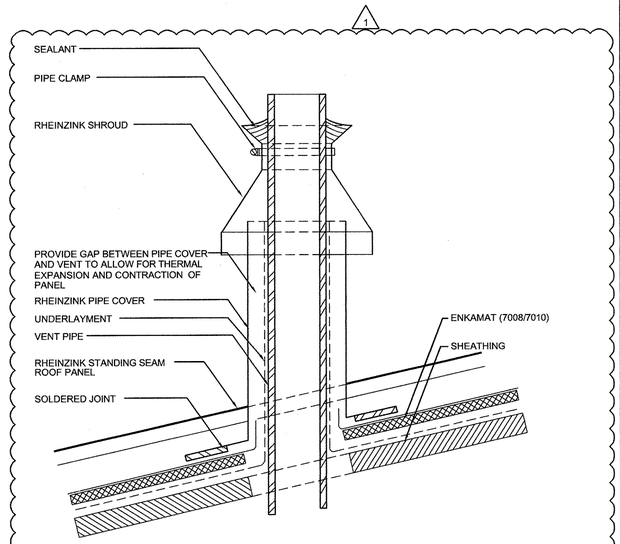
WATER HAMMER ARRESTOR SHALL BE INSTALLED IN AN UPRIGHT POSITION

WATER HAMMER ARRESTOR SHALL BE INSTALLED AT EACH QUICK CLOSING FAUCET OR FLUSH VALVE UNLESS USED IN A BANK OF FIXTURES.

WHEN INSTALLING ON A BANK OF FIXTURES THE WATER HAMMER ARRESTOR SHALL BE INSTALLED BEFORE THE LAST FIXTURE ON THE BANK.

WATER HAMMER ARRESTOR

NTS | 6



NOTE:

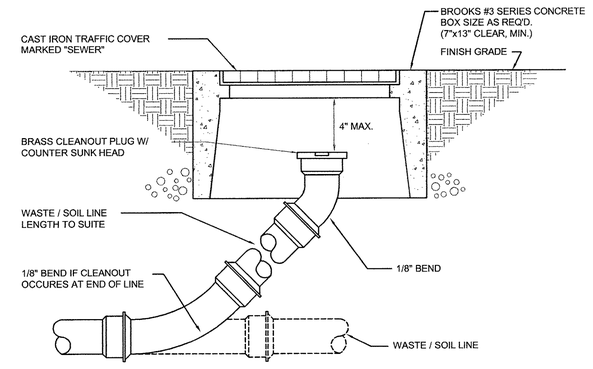
INFORMATION AND DETAILS HEREIN ARE ONLY A BASELINE FOR SYSTEM DESIGN AND INSTALLATION. MODIFICATION TO MEET PROJECT REQUIREMENTS IS THE RESPONSIBILITY OF THE DESIGNER AND ARCHITECT. RHEINZINK AMERICA STAFF ARE AVAILABLE TO ASSIST THE DESIGNER AND ARCHITECT IN THIS PROCESS.

FASTENER: RECOMMENDATIONS:
STAINLESS STEEL
CLIMA SEAL
CLIMACOAT

STANDING SEAM PANEL REQUIRE A MINIMUM OF 2:12 SLOPE. STANDING SEAM PANEL SYSTEMS REQUIRE RHEINZINK PROROOFING OR ENKAMAT 7008/7010

VENT THROUGH ROOF

NTS | 4



EXTERIOR CLEANOUT IN YARDBOX

NTS | 2

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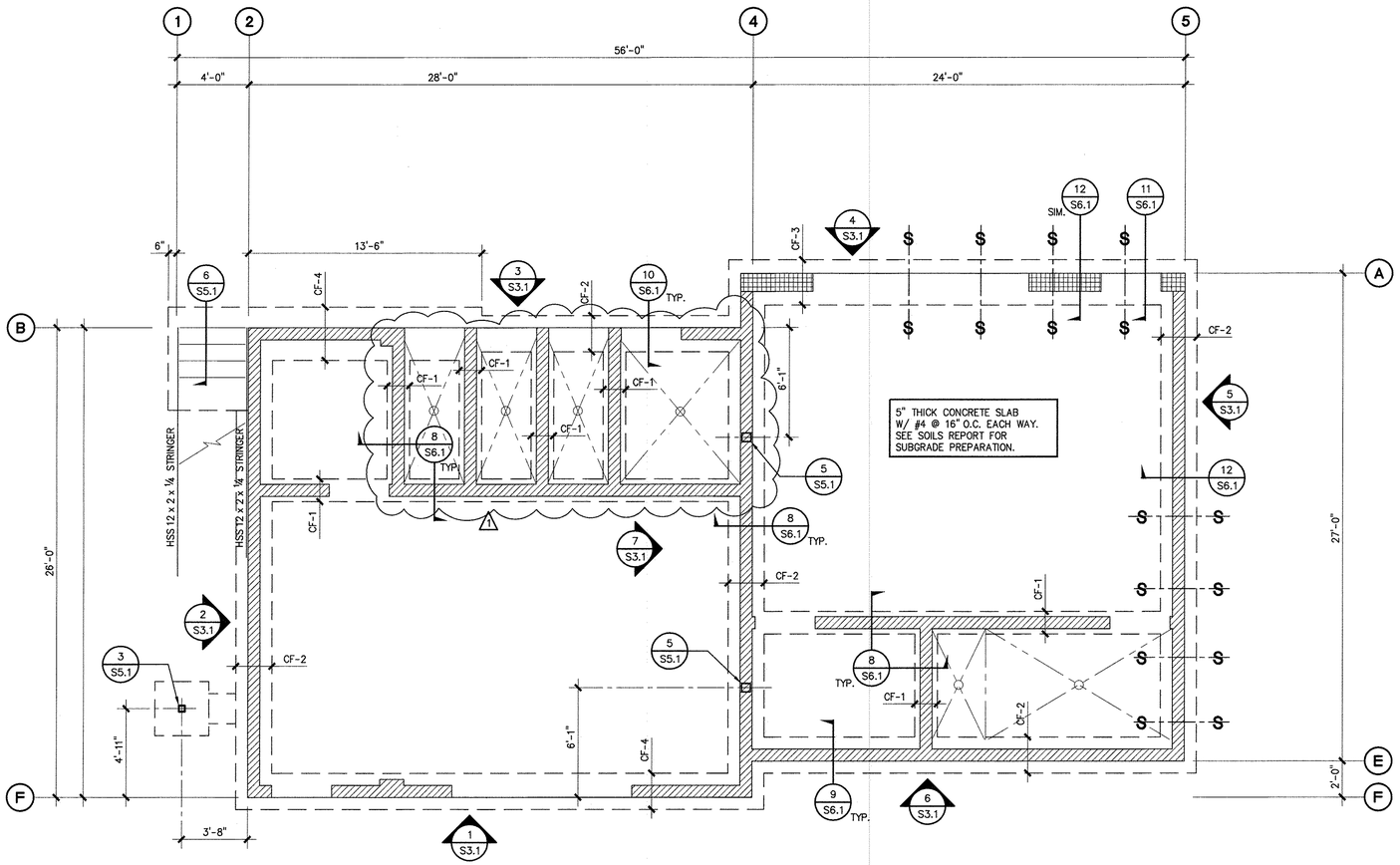
FOUNDATION NOTES:

1. SEE GENERAL NOTES ON SHEET "S4.1".
2. FOR TYPICAL CONCRETE DETAILS SEE SHEET "S4.3", TYPICAL MASONRY DETAILS SEE SHEET "S6.1".
3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
4. VERIFY ALL DIMENSIONS, DEPRESSIONS, PITS, SLOPES, CURBS, STEPS, ETC. WITH ARCHITECTURAL AND/OR MEP DRAWINGS.
5. DATUM ELEVATION OF [0'-0"] IS AT THE HIGHEST POINT OF SLAB ON GRADE.
6. VERIFY WITH ARCH. OR CIVIL DRAWINGS THE EXTENT OF EXTERIOR SLAB ON GRADE.
7. EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE STRUCTURE, NO MATERIAL IS TO BE EXCAVATED UNNECESSARILY.
8. SPECIAL INSPECTION IS REQUIRED FOR PLACEMENT OF ALL CONCRETE AND MASONRY WALLS.
9. INDICATES 8" CMU WALLS.
10. INDICATES 12" CMU WALLS.
11. INDICATES CONCRETE WALLS.
12. S—S INDICATES STEPPED FOOTING PER DETAIL "11/S4.3".
13. CF-X INDICATES CONTINUOUS FOOTING, SEE SCHEDULE IN DETAIL "7/S6.1" FOR SIZE AND REINF.
14. FOR TYPICAL STAIR DETAILS SEE "S7.1".



FOUNDATION PLAN

0 2' 4' 8' 16'

NORTH

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Foothill Ranch, CA 92610
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S-2.1

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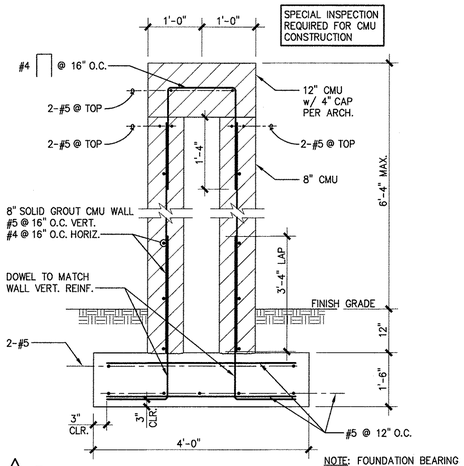
JOB NO. 1109531

FILE NO. ____

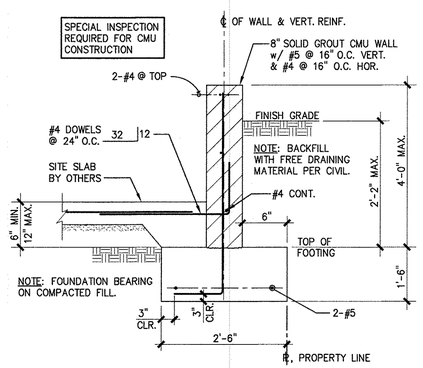
PROJECT ADDRESS:
EL SEGUNDO, CA

10/05/2010 1:20PM
K:\2010\10101\10101_S21.dwg, Foundation

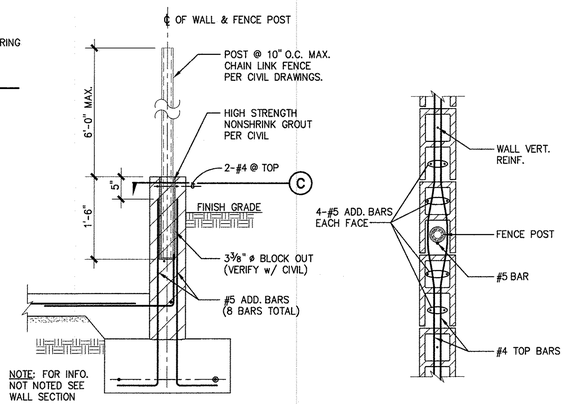
10 101/ 10101_S21/ 10/05/10



1 **10** **FREE STANDING SITE SHOWER WALL**



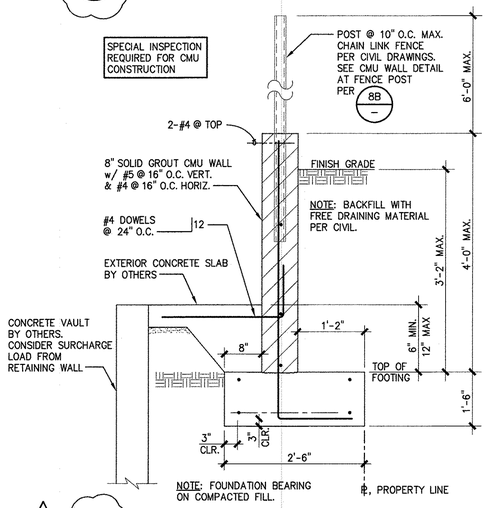
A **TYPICAL WALL SECTION**



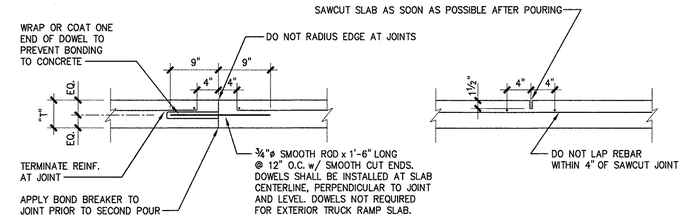
B **SECTION AT FENCE POST**

C **SECTION**

1 **8** **SOUTH SITE RETAINING WALL DETAIL**



1 **9** **EAST SITE RETAINING WALL DETAIL**



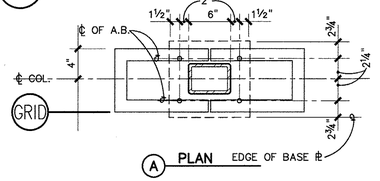
CONSTRUCTION JOINT "A"
DOWELED CONSTRUCTION JOINT

CONTROL JOINT "B"
SAW CUT CONTROL JOINT

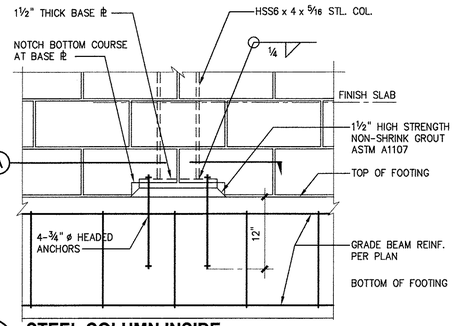
NOTES:

1. SLABS MAY BE POURED IN STRIPS 52'-0" WIDE MAXIMUM, WITH CONSTRUCTION JOINTS OR CONTROL JOINTS IN PERPENDICULAR DIRECTION AT A MAXIMUM DISTANCE OF 18'-0" BETWEEN JOINTS.
2. CONSTRUCTION JOINTS SHALL OCCUR IN AT LEAST ONE DIRECTION AND SHALL BE SPACED NO FURTHER APART THAN 52'-0" (INTERMEDIATE CONTROL JOINTS SHALL OCCUR AT MIN. 18'-0" O.C.)
3. SAWCUT CONTROL JOINTS MAY BE USED IN BOTH DIRECTIONS AND SPACED AT 18'-0"
4. SAWCUT JOINTS SHALL BE MADE IMMEDIATELY AFTER FINISHING OPERATION AND PRIOR TO DRYING SHRINKAGE. SAW CUT JOINTS SHALL BE MADE WITH "EARLY ENTRY" SAW EQUIPMENT.
5. DISCONTINUE REINFORCING UNDER ANY COLUMN LINE CONTROL OR CONSTRUCTION JOINT.
6. FINISHING OF SLAB CONCRETE SHALL BE DONE AFTER SURFACE BLEED WATER HAS EVAPORATED.
7. CONCRETE SHALL HAVE AIR ENTERTAINMENT OF 2% TO 3% BY VOLUME.
8. MOISTEN SUB-GRADE PRIOR TO PLACING CONCRETE.
9. APPLY MEMBRANE CURING TO SLAB ON GRADE IMMEDIATELY AFTER FINISHING OPERATION.

4 SLAB CONSTRUCTION JOINTS

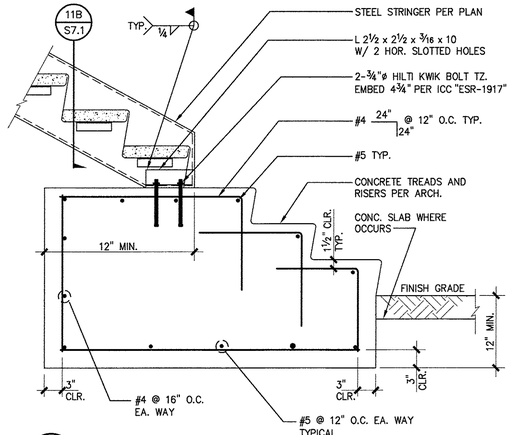


A **PLAN** EDGE OF BASE ℄

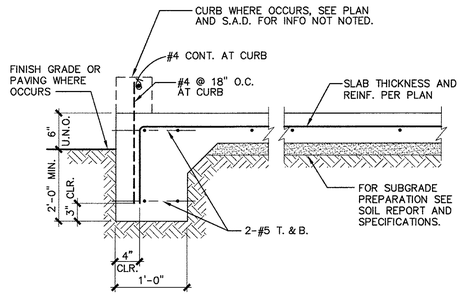


A

5 STEEL COLUMN INSIDE CMU WALL

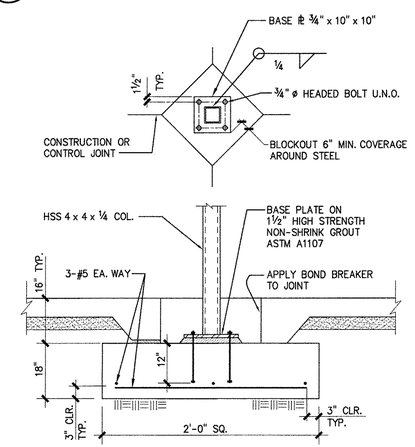


6 STAIR LANDING DETAIL



EDGE OF SLAB **TYPICAL SLAB ON GRADE**

2 TYPICAL SLAB EDGE



3 COLUMN BASE/PAD FOOTING

PROJECT ADDRESS:
EL SEGUNDO, CA

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A California Corporation | Victor Montgomery, Architect #C-11090 | Jerry Michael, P.E. #34691, LS #5570 | Jeff Farber, LA #2644

REVISIONS		
NO.	DATE	BY
1	10/06/10	STL

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
DETAILS

S-5.1
05/04/2010

PM ____ DATE ____
DRAWN ____ DATE ____
CHECK ____ DATE ____

APPROVED DATE ____
CITY ENGINEER R.E. ____

SHEET 36 OF 68
JOB NO. 1109531

FILE NO. ____

10/05/2010 12:17PM
K:\2010\1091\10101\ S51.dwg CONCRETE

10 101/ 10101_S51/ 10/05/10