APPENDIX 8. GRADING PLAN REFERENCE ONLY

GRADING NOTES

- 1. ALL GRADING SHALL CONFORM TO THE LATEST CALIFORNIA BUILDING CODE (CBC) CHAPTERS 17, 18, APPENDIX-J AND ALL APPLICABLE
- 2. A GRADING PERMIT SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF ANY WORK ON THE SITE.

ACCORDANCE TO PLANS APPROVED FOR THIS PURPOSE BY THE PUBLIC WORKS DEPARTMENT.

- 3. ISSUANCE OF A GRADING PERMIT DOES NOT ELIMINATE THE NEED FOR PERMITS FROM OTHER REGULATORY AGENCIES WITH REGULATORY RESPONSIBILITIES FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE WORK AUTHORIZED IN THIS PLAN.
- 4. ALL WORK UNDER THIS PERMIT SHALL BE LIMITED TO WORK WITHIN THE PROPERTY LINES. A SEPARATE CONSTRUCTION, EXCAVATION OR ENCROACHMENT PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS MAY BE REQUIRED FOR ANY WORK WITHIN THE COUNTY
- 5. APPROVAL OF THESE PLANS DOES NOT AUTHORIZE ANY WORK OR GRADING TO BE PERFORMED UNTIL THE EFFECTIVE PROPERTY OWNER'S PERMISSION HAS BEEN OBTAINED AND VALID GRADING PERMIT HAS BEEN ISSUED
- 6. THIS PLAN IS FOR GRADING PURPOSES ONLY AND IS NOT TO BE USED FOR THE PURPOSE OF CONSTRUCTING ONSITE OR OFFSITE IMPROVEMENTS. ISSUANCE OF A PERMIT BASED ON THIS PLAN DOES NOT CONSTITUTE APPROVAL OF DRIVEWAY LOCATIONS OR SIZES. PARKING LOT STRUCTURAL SECTIONS OR LAYOUT, ADA-RELATED REQUIREMENTS, BUILDING LOCATIONS OR FOUNDATIONS, WALLS, CURBING OFFSITE DRAINAGE FACILITIES OR OTHER ITEMS NOT RELATED DIRECTLY TO THE BASIC GRADING OPERATION. ONSITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE APPROVED BUILDING PERMIT PLANS. OFFSITE IMPROVEMENTS SHALL BE CONSTRUCTED IN
- 7. MAXIMUM CUT AND FILL SLOPE = 2:1 (HORIZONTAL TO VERTICAL) AND MAXIMUM VERTICAL HEIGHT = 30 FEET, UNLESS AN APPROVED GEOTECHNICAL REPORT CAN JUSTIFY A STEEPER AND TALLER SLOPE.
- 8. NO FILL SHALL BE PLACED ON EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL AND OTHER DELETERIOUS MATERIAL
- 9. FILL SLOPES SHALL NOT HAVE LESS THAN 90% RELATIVE COMPACTION, OR AS RECOMMENDED ON THE APPROVED GEOTECHNICAL REPORT. 10.IT IS THE GRADING CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ADEQUATE COMPACTION HAS BEEN ATTAINED ON THE ENTIRE GRADING SITE, INCLUDING FILL AREAS OUTSIDE THE BUILDING PADS AND ON ALL FILL SLOPES.
- 11.UNLESS OTHERWISE RECOMMENDED IN AN APPROVED GEOTECHNICAL REPORT, OVER-EXCAVATION SHALL BE AT LEAST 60" (5') MINIMUM BELOW THE BOTTOM OF FOOTINGS OR TO COMPETENT NATIVE SOIL OR BEDROCK MATERIALS, WHICHEVER IS DEEPER, AS APPROVED BY THE PROJECT'S GEOTECHNICAL ENGINEER OR GEOLOGIST.
- 12. EARTHWORK VOLUMES: CUT___1,311_(CY), FILL_129_ (CY), TOTAL_DISTURBED_AREA _50,966_ (SF)
- 13. EARTHWORK QUANTITIES ARE SHOWN FOR GRADING PERMIT PURPOSES ONLY, AND SAN BERNARDINO COUNTY IS NOT RESPONSIBLE FOR
- 14. A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.
- 15. ANY ONSITE RETAINING WALLS SHOWN ON THE GRADING PLANS THAT ARE OVER 4' IN HEIGHT, MEASURED FROM TOP OF WALL TO BOTTOM OF FOOTING, ARE FOR REFERENCE ONLY. RETAINING WALLS OVER 4' IN HEIGHT ARE NOT CHECKED, PERMITTED, OR INSPECTED PER THE GRADING PERMIT. A SEPARATE RETAINING WALL PERMIT IS REQUIRED FOR ALL RETAINING WALLS OVER 4' IN HEIGHT.
- 16. ANY WALLS, FENCES, STRUCTURES AND/OR APPURTENANCES ADJACENT TO THIS PROJECT ARE TO BE PROTECTED IN PLACE. IF GRADING OPERATIONS DAMAGE OR ADVERSELY AFFECT SAID ITEMS IN ANY WAY, THE CONTRACTOR AND/OR DEVELOPER IS RESPONSIBLE FOR WORKING OUT AN ACCEPTABLE SOLUTION TO THE SATISFACTION OF THE AFFECTED PROPERTY OWNER(S).
- 17. FOR SITES WITH PROTECTED SPECIES OR TREES, THE PROPOSED GRADING MAY BE SUBJECT TO A SEPARATE PERMIT.
- 18. ADEQUATE FIRE ACCESS AROUND BUILDINGS (INCLUDING GARAGES) SHOULD BE PROVIDED AS APPROVED BY COUNTY FIRE. 19. EXISTING DRAINAGE COURSES SHALL NOT BE OBSTRUCTED, ALTERED, OR DIVERTED WITHOUT PRIOR APPROVAL FROM THE COUNTY OF SAN
- BERNARDINO, LAND DEVELOPMENT DIVISION. A STREAMBED ALTERATION AGREEMENT MAY ALSO BE REQUIRED FROM THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE.
- 20.DRAINAGE EASEMENTS SHALL NOT BE OBSTRUCTED, ALTERED OR DIVERTED WITHOUT PRIOR APPROVAL OF THE COUNTY OF SAN BERNARDINO, LAND DEVELOPMENT DIVISION.
- 21.SETBACKS AND BUILDING LOCATIONS SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND MUST BE REVIEWED AND APPROVED UNDER A SEPARATE BUILDING PERMIT.
- 22.UTILITY AND SEPTIC IMPROVEMENTS SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND MUST BE REVIEWED AND APPROVED UNDER A
- 23.A NOTICE OF INTENT (NOI) HAS BEEN, OR WILL BE FILED WITH THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) AND A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN OR WILL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY (PERMIT NO. CASOOOOO2) FOR ALL OPERATIONS ASSOCIATED WITH THESE PLANS. THE PERMITTEE SHALL KEEP A COPY OF THE SWPPP ON SITE AND AVAILABLE FOR
- 24.IN CONJUNCTION WITH THE CALIFORNIA GENERAL PERMIT FOR PROPOSED DISTURBANCE OVER ONE ACRE, AN ACTIVE WASTEWATER _ MUST BE INCLUDED ON THE FINAL GRADING PLAN
- 25. A FINAL GRADING CERTIFICATION WILL BE COLLECTED BY THE BUILDING INSPECTOR AT THE FINAL BUILDING INSPECTION OR PRIOR A GRADING FINAL STATUS ON THE PERMIT. THE FINAL GRADING CERTIFICATION IS TO BE COMPLETED BY THE ENGINEER OF RECORD ON THE
- 26. THE SOILS ENGINEER SHALL PROVIDE A FINAL SOIL GRADING REPORT INCLUDING LOCATIONS AND ELEVATIONS OF FIELD DENSITY TESTS, SUMMARIES OF FIELD AND LABORATORY TESTS AND OTHER SUBSTANTIATING DATA AND COMMENTS ON ANY CHANGES MADE DURING GRADING AND THEIR EFFECT ON THE RECOMMENDATIONS MADE IN THE SOIL ENGINEERING INVESTIGATION REPORT. IT SHALL ALSO PROVIDE INFORMATION AS TO LOCATION AND NATURE OF TESTS, STATEMENTS RELATIVE TO THE EXPANSIVE NATURE OF SOIL AND/OR ROCK MATERIAL, LIMITS OF COMPACTED FILL SHOWN ON THE AS-GRADED PLAN AND CERTIFICATION AS TO THE ADEQUACY AND STABILITY OF
- 27.IF APPLICABLE, THE ENGINEERING GEOLOGIST SHALL PROVIDE A GEOLOGIC GRADING REPORT INCLUDING A FINAL DESCRIPTION OF THE GEOLOGY OF THE SITE INCLUDING ANY NEW INFORMATION DISCLOSED DURING THE GRADING AND THE EFFECT OF SAME ON RECOMMENDATIONS INCORPORATED IN THE APPROVED GRADING PLAN. THE ENGINEERING GEOLOGIST SHALL PROVIDE CERTIFICATION AS TO THE ADEQUACY OF THE SITE FOR THE INTENDED USE AS AFFECTED BY GEOLOGIC FACTORS. WHERE NECESSARY, A REVISED GEOLOGIC MAP AND CROSS-SECTIONS, AND ANY RECOMMENDATIONS REGARDING SPECIAL BUILDING RESTRICTIONS OR FOUNDATION SETBACKS SHALL
- 28. SHOULD THE EXCAVATION DISCLOSE SOIL AND/OR ROCK CONDITIONS WHERE CUT SLOPES ARE UNSTABLE, THE ENGINEERING GEOLOGIST
- 29. GEOLOGICAL AND SOILS ENGINEERING REPORTS BY INLAND FOUNDATION ENGINEERING, INC, DATED 09/06/2024 AND ALL SOILS REPORT ADDENDUM(DA) SHALL BE INCORPORATED HEREWITH AND MADE PART OF THIS GRADING PLAN.

AND/OR THE SOILS ENGINEER SHALL RECOMMEND NECESSARY TREATMENT TO THE BUILDING OFFICIAL FOR APPROVAL.

- 30.THE CONTRACTOR SHALL IMPLEMENT PREVENTIVE MEASURES TO ASSURE THAT NO ROCKS, SOIL, DUST, OR DEBRIS OF ANY FORM SHALL FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES OR PUBLIC WAYS. ALL VEHICLE LOADS SHALL BE TRIMMED AND WATERED OR OTHERWISE SECURED TO PREVENT SPILLAGE FROM THE EQUIPMENT.
- 31.ALL EXPORT AND IMPORT OF MATERIAL OVER DEDICATED AND IMPROVED STREETS SHALL BE UNDERTAKEN OR CONDUCTED BY EQUIPMENT THAT COMPLIES IN ALL RESPECTS TO THE STATE VEHICLE CODE. REPAIR TO ANY DAMAGED DEDICATED OR IMPROVED STREETS SHALL BE MADE TO THE SATISFACTION OF THE BUILDING OFFICIAL AND IS THE RESPONSIBILITY OF THE OWNER, PERMITTEE, AND THE GRADING CONTRACTOR.
- 32.ALL FLOOD ZONE REQUIREMENTS MUST BE REFLECTED OR ACCOUNTED FOR ON THE GRADING PLANS. ELEVATIONS OR CONSTRUCTION NOTES MUST BE INCLUDED IN THE PLANS TO ENSURE COMPLIANCE WITH ALL APPLICABLE FIRST FLOOR ELEVATION REQUIREMENTS PER
- FEMA AND SAN BERNARDINO COUNTY DEVELOPMENT CODE GUIDELINES. 33. ALL GRADING SHALL COMPLY WITH SBC DEVELOPMENT CODE SECTION 82.14.050.C: IF FILL IS PLACED TO ELEVATE PADS ABOVE BASE ELEVATION, IT MUST BE DEMONSTRATED THAT FILL WILL NOT SETTLE AND IS PROTECTED FROM EROSION, SCOUR, OR DIFFERENTIAL
- SETTLEMENT, AS FOLLOWS. 33.1. THE PAD ELEVATION SHALL BE CERTIFIED TO MEET OR EXCEED THE ELEVATION REQUIRED BY THE APPLICABLE FLOODPLAIN SAFETY REVIEW AREA, AND IT MUST BE DEMONSTRATED THAT THE CUMULATIVE EFFECT OF THE PROPOSED DEVELOPMENT WHEN COMBINED WITH ALL OTHER EXISTING AND ANTICIPATED DEVELOPMENT WILL NOT INCREASE THE WATER SURFACE ELEVATION OF THE BASE FLOOD AT ANY POINT WITHIN
- 33.2. FILL SHALL BE COMPACTED TO 95 PERCENT PER ASTM (AMERICAN SOCIETY OF TESTING MATERIALS) STANDARD D-698.
- 33.3. FILL SLOPES SHALL BE NO STEEPER THAN TWO FEET HORIZONTAL TO ONE FOOT VERTICAL RATIO UNLESS SUBSTANTIATING DATA FOR STEEPER SLOPES IS PROVIDED, AND THE SLOPES ARE APPROVED BY THE COUNTY.
- 33.4. FILL SLOPES ADJACENT TO A WATER COURSE MAY BE REQUIRED TO BE ARMORED WITH STONE, ROCK OR APPROVED EQUAL PROTECTION. 34.FOR NONRESIDENTIAL PROJECTS, PROVIDE FOLLOWING NOTE ON PLANS:
- CALIFORNIA GREEN BUILDING STANDARDS CODE
- 5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS.
- 100 PERCENT OF TREES, STUMPS, ROCKS AND ASSOCIATED VEGETATION AND SOILS RESULTING PRIMARILY FROM LAND CLEARING SHALL BE REUSED OR RECYCLED. FOR A PHASED PROJECT, SUCH MATERIAL MAY BE STOCKPILED ON SITE UNTIL THE STORAGE SITE IS DEVELOPED. EXCEPTION: REUSE, EITHER ON-OR OFF-SITE, OF VEGETATION OR SOIL CONTAMINATED BY DISEASE OR PEST INFESTATION.
- 35. CONTRACTOR SHALL ACQUIRE ENCROACHMENT PERMITS, CONSTRUCTION PERMITS OR ACCEPTANCE CORRESPONDENCE IN KIND PRIOR TO EXCAVATION ON THE STREET FOR UTILITIES.
- 36. CONTRACTOR SHALL FOLLOW MONUMENT PRESERVATION PER BUSINESS AND PROFESSIONS CODE § 8776

CIVIL ENGINEER'S STATEMENT:

"I CERTIFY THAT I WILL BE RESPONSIBLE FOR THIS GRADING IN ACCORDANCE WITH SECTION 7014(C) OF THE BUILDING CODE TO INCLUDE INCORPORATING ALL RECOMMENDATIONS OF THE SOILS ENGINEER, REPORT AND BE RESPONSIBLE FOR PROFESSIONAL INSPECTION AND APPROVAL OF THE GRADING. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, INSPECTION AND APPROVAL AS TO THE ESTABLISHMENT OF LINE GRADE AND DRAINAGE OF DEVELOPMENT AREA. I WILL ALSO BE RESPONSIBLE FOR THE PREPARATION OF REVISED PLANS AND THE SUBMISSION OF 'AS GRADED' GRADING PLANS UPON THE COMPLETION OF THE WORK.

LEIDY STEPHANIA HERNANDEZ, P.F. SUPERVISING CIVIL ENGINEER R.C.E. NUMBER

SOILS ENGINEER'S STATEMENT

"I SHALL PROVIDE PROFESSIONAL INSPECTION AND APPROVAL CONCERNING THE PREPARATION OF GROUND TO RECEIVE FILLS, TESTING FOR REQUIRED COMPACTION STABILITY OF ALL FINISHED SLOPES AND INCORPORATING THE DATE SUPPLIED BY THE ENGINEERING GEOLOGIST AND THE PREPARATION OF THE SOILS GRADING REPORT."

ALLEN D. EVANS, P.E., G.E. 2060
SUPERVISING CIVIL ENGINEER R.C.E. NUMBER SIGNATURE

NO GRADING IN EXCESS OF 5000 CU. YDS. SHALL BE STARTED WITHOUT FIRST NOTIFYING THE ENGINEER. A PRE-GRADING MEETING AT THE SITE IS REQUIRED BEFORE START OF GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, SUPERVISING

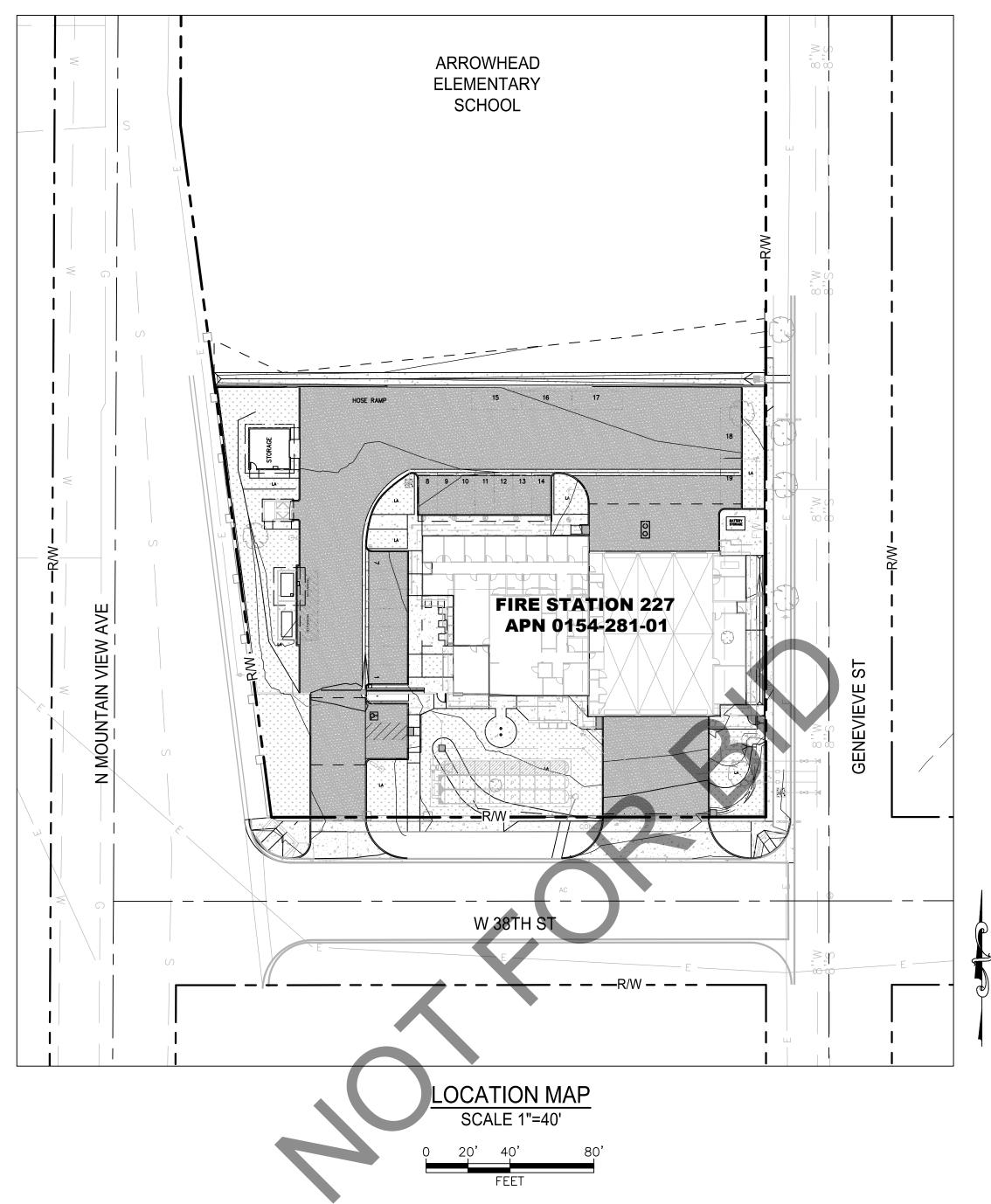
THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE CITY OF SAN BERNARDINO WHEN THE GRADING OPERATION (EXCEEDING 5000 CU. YDS.) IS READY FOR REQUIRED INSPECTIONS AS SHOWN IN THE TESTING AND INSPECTION REQUIREMENTS OF DIVISION V.

CIVIL ENGINEER, SOILS ENGINEER AND/OR GEOLOGIST, CITY CONSTRUCTION INSPECTORS OR THEIR REPRESENTATIVES.

WATER, SEWER AND PLUMBING ELEMENTS PER SEPARATE PERMIT.

SAN BERNARDINO COUNTY

FIRE STATION NO.227



LEGEND:

PROPOSED RIGHT OF WAY

PROPOSED IMPROVEMENTS
PROPOSED DRAINAGE FLOW LINE
EXISTING IMPROVEMENTS
EXISTING OVERHEAD LINE
EXISTING GAS LINE
EXISTING SEWER LINE
EXISTING STORM DRAIN LINE
EXISTING TELECOMM.
EXISTING WATER LINE
Ç/CENTER LINE
PROPOSED ELEVATION CONTOUR
EXISTING ELEVATION CONTOUR
SIDE SLOPE

CONSTRUCT PCC SIDEWALK

CONSTRUCT PCC IMPROVEMENTS

SHEET NO C-2C-3C-4

DESCRIPTION TITLE SHEET DETAILS SHEET DETAILS SHEET GRADING PLAN ON-SITE UTILITIES EROSION CONTROL

FIRE HYDRANT — · · · — · · — · · — TELEPHONE MANHOLE ELECTRICAL MANHOLE WATER METER ELECTRICAL PULLBOX BENCH MARK SPOT ELEVATION

EARTHWORK QUANTITIES

 $\frac{\text{FILL}=}{\text{TOTAL EXPORT}} = \frac{129 \text{ C.Y.}}{1182 \text{ C.Y.}}$

IMPORT OF THE MATERIAL.

----R/W----

*EARTHWORK NOTE: EARTHWORK VOLUMES SHOWN HERE ARE FOR FEE PURPOSES ONLY NOT FOR BIDDING. CONTRACTOR SHALL PERFORM INDEPENDENT EARTHWORK CALCULATIONS AND BID A COMPLETE JOB. THE SOURCE OF FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER OF RECORD AND THE BUILDING DEPARTMENT BEFORE

ASPHALT CONCRETE

-\$\dots

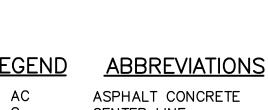
AC	ASPHALT CONCRETE
©	CENTER LINE
C&G	CURB AND GUTTER
FF	FINISHED FLOOR
FL	FLOW LINE
FS	FINISHED SURFACE
GB	GRADE BREAK
NTS	NOT TO SCALE
PL	PROPERTY LINE
RL	RIDGE LINE
R/W	RIGHT OF WAY
SWR	SEWER
TC	TOP OF CURB
TD	TOP OF DITCH
TF	TOP OF FOOTING
TG	TOP OF GRATE
TW	TOP OF WALL
エンロ	

UTILITIES CONTACT

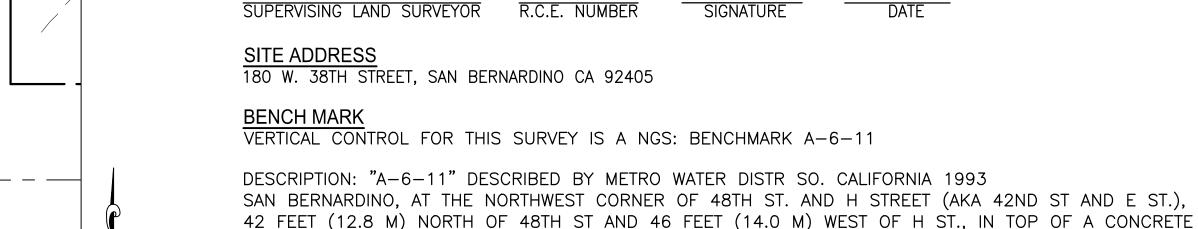
SOUTHERN CALIFORNIA EDISON 1-800-990-7788 SOUTHERN CALIFORNIA GAS 1-800-427-2000 FRONTIER

(877) 599-1870 SPECTRUM (833) 267-6094

SAN BERNARDINO, CA 92408 (909) 384-5141



SAN BERNARDINO MUNICIPAL WATER DISTRICT 1350 SOUTH E STREET



VERTICAL CONTROL FOR THIS SURVEY IS A NGS: BENCHMARK A-6-11 DESCRIPTION: "A-6-11" DESCRIBED BY METRO WATER DISTR SO. CALIFORNIA 1993 SAN BERNARDINO, AT THE NORTHWEST CORNER OF 48TH ST. AND H STREET (AKA 42ND ST AND E ST.),

POST 0.4 FOOT (12.2CM) BELOW CONCRETE SIDEWALK AND 10 FEET NORTHWEST OF CURB FACE. ELEVATION:1364.63' (NAVD88)

OWNER/APPLICANT

TOPOGRAPHY SOURCE

ERSC.INC, DATED 07/26/2024

ROBERT OLLERTON

(909) 387-5000

(909) 890-1255

SIGNATURE

48TH ST

SAN BERNARDINO

VICINITY MAP

38TH ST

MUSCOY

BASELINE ROAD

SAN BERNARDINO COUNTY PROJECT & FACILITIES MANAGMENT DEPARTMENT

385 N. ARROWHEAD AVE., SAN BERNARDINO, CA, 92415

1810 W. REDLANDS AVE., REDLANDS, CALIFORNIA 92373

SITE LOCATION

COUNTY PROJECT NUMBERS

GRAD-2025-000008

ASSOCIATED RECORDS

NEWNR-2025-00002

DRNSTY-2025-00006

WQMP-2025-00005

GEOTECHNICAL ENGINEER'S

GEOLOGIC HAZARDS EVALUATION/GEOTECHNICAL INVESTIGATION, DATED 09/06/2024 INLAND FOUNDATION ENGINEERING, INC. 1310 S. SANTA FE AVENUE, SAN JACINTO, CALIFORNIA 92581 (951) 654–1555

FEMA FLOOD ZONE INFORMATION

THIS PROJECT IS LOCATED IN FLOOD ZONE X, AREAS OF 0.2% ANNUAL CHANGE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1%ANNUAL CHANCE FLOOD PER FEMA FLOOD INSURANCE RATE MAP NUMBER 06071C7945H EFFECTIVE AUGUST 28, 2008.

LEGAL DESCRIPTION

PTN W 1/2 NE 1/4 SEC 22 TP 1N R 4W COM ON E LI MT VIEW AVE S 00 DEG 17 1/2 MIN W 480 FT FROM SW COR LOT 15 TR 1948 TH S 00 DEG 17 1/2 MIN W 794.51 FT TH S 89 DEG 34 1/2 MIN E 274.13 FT TH N 00 DEG 17 1/2 MIN E 794.51 FT TH N 89 DEG 34 1/2 MIN W 274.13 FT TO BEG EX STREET

EROSION CONTROL NOTES:

- 1. IN CASE OF EMERGENCY, CALL <u>ERNESTO GONZALEZ</u> AT <u>909</u>
- 2. POLLUTION AND EROSION PREVENTION MEASURES, ALSO KNOWN AS BEST MANAGEMENT PRACTICES (BMPS), MUST BE INSTALLED PRIOR TO GRADING. THESE MEASURES, INCLUDING THE PREVENTION OF SEDIMENTATION OR FLOOD DAMAGE, TO OFFSITE PROPERTY SHALL BE ADEQUATE WHETHER OR NOT AN EROSION CONTROL PERMIT IS REQUIRED.
- 3. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ONSITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES, OR WIND.
- 4. EROSION CONTROL DEVICES SHALL BE FUNCTIONING AT ALL TIMES. IN CASE OF FAILURE, RAPID CONSTRUCTION OF EMERGENCY DEVICES SHALL BE IMPLEMENTED.

5. STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED

- MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER. 6. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOILS AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT
- BE WASHED INTO THE DRAINAGE SYSTEM. 7. EXCESS OR WASTE CONCRETE MUST BE CONTAINED ONSITE.
- 8. DEVELOPERS/CONTRACTORS ARE RESPONSIBLE TO ENSURE ALL EROSION CONTROL DEVICES AND BMPS ARE INSTALLED AND FUNCTIONING PROPERLY PER PLAN. PROPER PRECAUTION OF PREDICTED PRECIPITATION, AND AFTER ACTUAL

BUILDING OFFICIAL.

- PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ONSITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
- SHALL BE CONSIDERED WHEN 50% OR GREATER PROBABILITY PRECIPITATION. A CONSTRUCTION SITE INSPECTION CHECKLIST AND INSPECTION LOG SHALL BE MAINTAINED AT THE PROJECT SITE AT ALL TIMES AND AVAILABLE FOR REVIEW BY THE

- 9. TRASH AND CONSTRUCTION-RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
- 10. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
- 11. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
- 12. ALL SILT AND DEBRIS SHALL BE REMOVED FROM ALL DEVICES WITHIN 24 HOURS AFTER EACH RAINSTORM AND BE DISPOSED OF PROPERLY. 13. ALL STORM WATER CAPTURE DEVICES SHALL BE PROTECTED
- AT ALL TIMES. 14. EROSION AND SEDIMENT CONTROL PRACTICES SHOULD BE IN CONFORMANCE WITH STANDARD PRACTICE. THE MOST COMMON
- EROSION CONTROL MEASURES ARE: 14.1. SCHEDULING
- 14.2. PRESERVATION OF EXISTING VEGETATION
- 14.3. STOCKPILE MANAGEMENT 14.4. SILT FENCE
- 14.5. FIBER ROLLS
- 14.6. SANDBAG BARRIER 14.7. STRAW BALE BARRIER
- 14.8. STORM DRAIN INLET PROTECTION 14.9. CONCRETE WASTE MANAGEMENT
- 14.10. VEHICLE AND EQUIPMENT FUELING 14.11. VEHICLE AND EQUIPMENT MAINTENANCE
- 14.12.STABILIZED CONSTRUCTION ENTRANCE/EXIT 14.13.ENTRANCE/EXIT TIRE WASH
- 14.14. WIND EROSION CONTROL 15. DUST SHALL BE CONTROLLED BY WATERING.



CONSULTANT:

1861 W. Redlands Blvd, Bldg 7B

Redlands, Ca. 92373 P: (909) 890-1255

F: (909) 890-0995

PROJECT ADMINISTERED BY:

SAN BERNARDINO COUNTY

PROJECT & FACILITIES

MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE. SAN BERNARDINO, CA 92415

PROJECT NAME:

SAN BERNARDINO **COUNTY FIRE DEPARTMENT: FIRE STATION 227**

PROJECT # 10.10.1202

CIP #22-105 APN: 0154-281-01

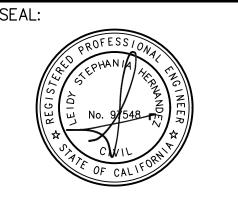
180 W. 38TH STREET

SAN BERNADINO, CA 92405

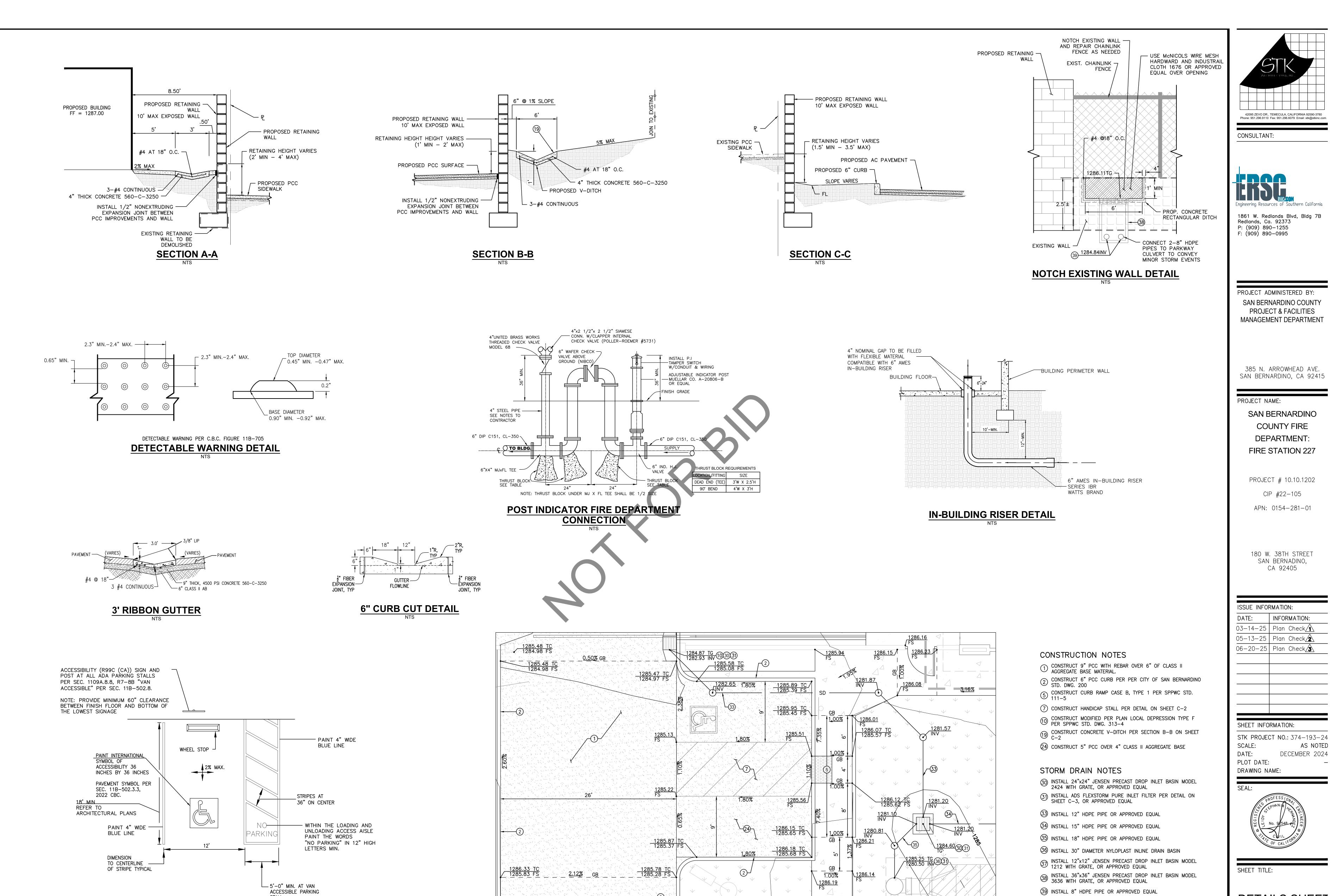
ISSUE INFORMATION: INFORMATION: 03-14-25 | Plan Check/1 05-13-25 | Plan Check/2 06-20-25 | Plan Check/3

> SHEET INFORMATION: STK PROJECT NO.: 374-193-24

> SCALE: AS NOTED DATE: DECEMBER 2024 PLOT DATE: DRAWING NAME:



TITLE SHEET



ENLARGED DETAIL "A"

SCALE: 1"=5'

PER CBC 2022, CHAPTER IIB-502.3.3 AND SPPWC STD. 180-0

ADA PARKING STALL DETAIL

DETAILS SHEET

AS NOTED

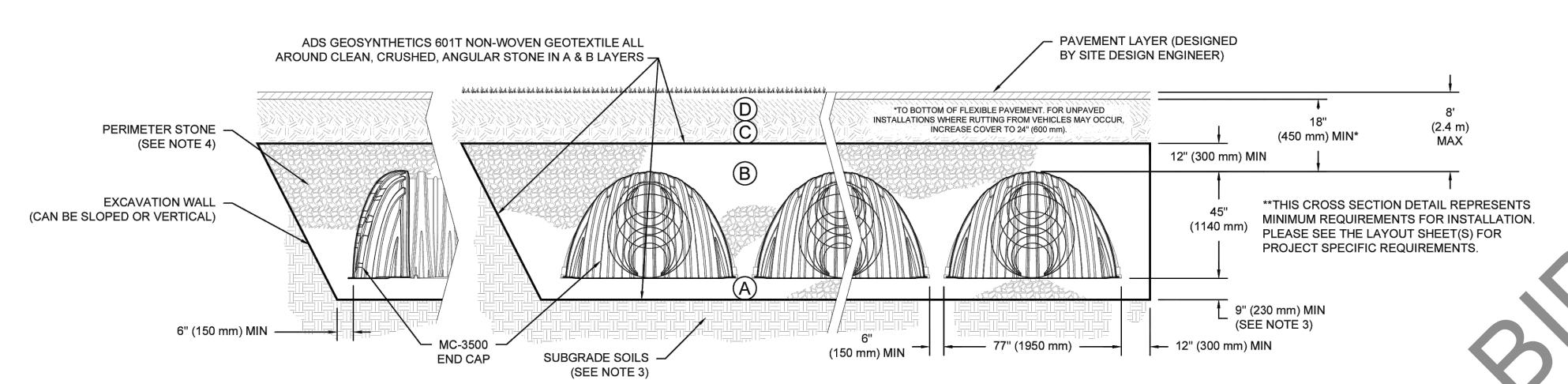
SHT 2 OF 6

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
С	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ⁵	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
А	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ⁵	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

- 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR
- 5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".

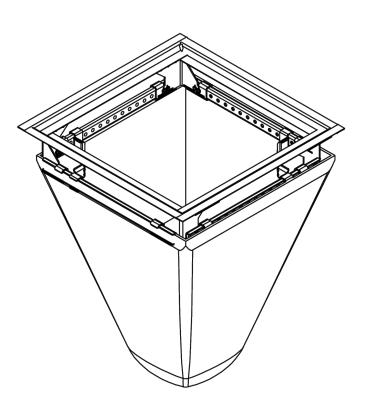


NOTES:

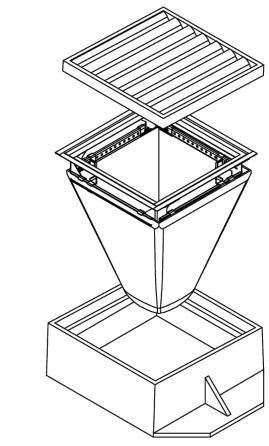
- 1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- 2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION
- FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE. 4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELL COLORS.

UNDERGROUND INFILTRATION CHAMBER SYSTEM

SEE WQMP FOR FURTHER DETAILS



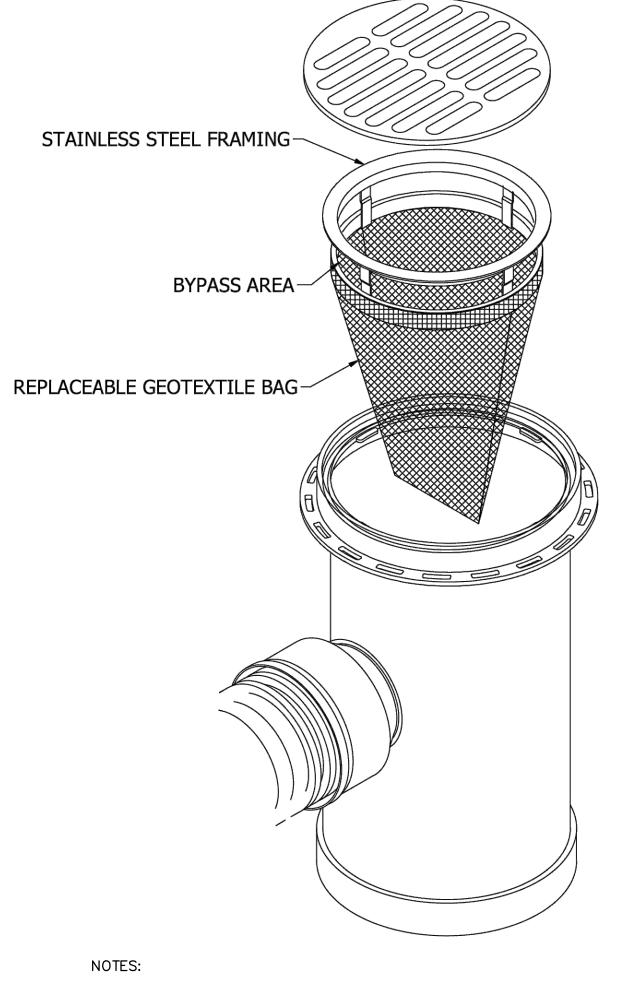
SQUARE/RECTANGULAR INLET FILTER		
Class Opening Size	Style P/N	Minimum Bypass
Clear Opening Size		Flow Rate (CFS)
Small: Up to 64" Perimeter	62SHD	2.4
Medium: 65" - 96" Perimeter	62MHD	3.5
Large: 97" - 120" Perimeter	62LHD	5.0
Extra-Large: 121" or Greater Perimeter	62XLHD	7.2





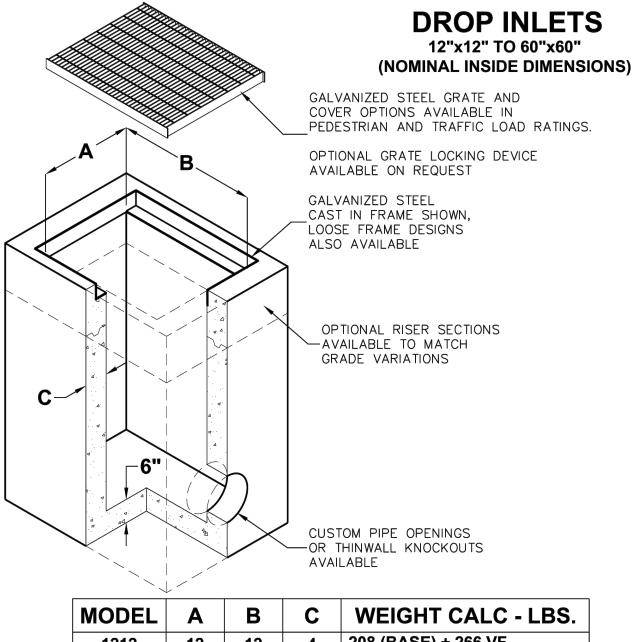
- 1. ALL FRAMING IS CONSTRUCTED OF 304 STAINLESS STEEL.
- 2. TOTAL BYPASS CAPACITY WILL VARY WITH EACH SIZE DRAINAGE STRUCTURE. ADS DESIGN FRAMING BYPASS TO MEET OR EXCEED THE DESIGN FLOW OF THE PARTICULAR DRAINAGE
- 3. ALL FILTERS MEET ASTM D8057 SPECIFICATIONS.

ADS FLEXSTORM PURE INLET DETAIL FOR PRECAST CATCH BASIN



- 1. ALL FRAMING IS CONSTRUCTED OF 304 STAINLESS STEEL.
- 2. TOTAL BYPASS CAPACITY WILL VARY WITH EACH SIZE DRAINAGE STRUCTURE. ADS DESIGN FRAMING BYPASS TO MEET OR EXCEED THE DESIGN FLOW OF THE PARTICULAR DRAINAGE
- 3. ALL FILTERS MEET ASTM D8057 SPECIFICATIONS.

ADS FLEXSTORM PURE INLET DETAIL FOR NYLOPLAST INLET



MODEL	Α	В	С	WEIGHT CALC - LBS.
1212	12	12	4	208 (BASE) + 266 VF
1616	16	16	5	408 (BASE) + 480 VF
1818	18	18	5	602 (BASE) + 604 VF
2424	24	24	6	675 (BASE) + 750 VF
2436	24	36	6	900 (BASE) + 900 VF
2448	24	48	6	1500 (BASE) + 1050 VF
3030	30	30	6	920 (BASE) + 900 VF
3636	36	36	6	1200 (BASE) + 1050 VF
3648	36	48	6	1500 (BASE) + 1200 VF
4848	48	48	6	1875 (BASE) + 1350 VF
6060	60	60	6	2700 (BASE) + 1650 VF

FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.

12/20/2010 DI_CONSOL_B.DWG © 2010

(7)

3 OF #

Jensen Precast reserves the right to make changes to product design and/or dimensions without notice. Please contact Jensen Precast whenever necessary for confirmation or advice on product design.



CONSULTANT:

1861 W. Redlands Blvd, Bldg 7B Redlands, Ca. 92373 P: (909) 890-1255 F: (909) 890-0995

PROJECT ADMINISTERED BY: SAN BERNARDINO COUNTY PROJECT & FACILITIES MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE. SAN BERNARDINO, CA 92415

PROJECT NAME:

SAN BERNARDINO **COUNTY FIRE** DEPARTMENT: **FIRE STATION 227**

PROJECT # 10.10.1202

CIP #22-105

APN: 0154-281-01

180 W. 38TH STREET

SAN BERNADINO,

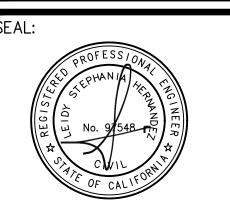
CA 92405

ISSUE INFOR	RMATION:
DATE:	INFORMATION:
03_1/_25	Plan Chook

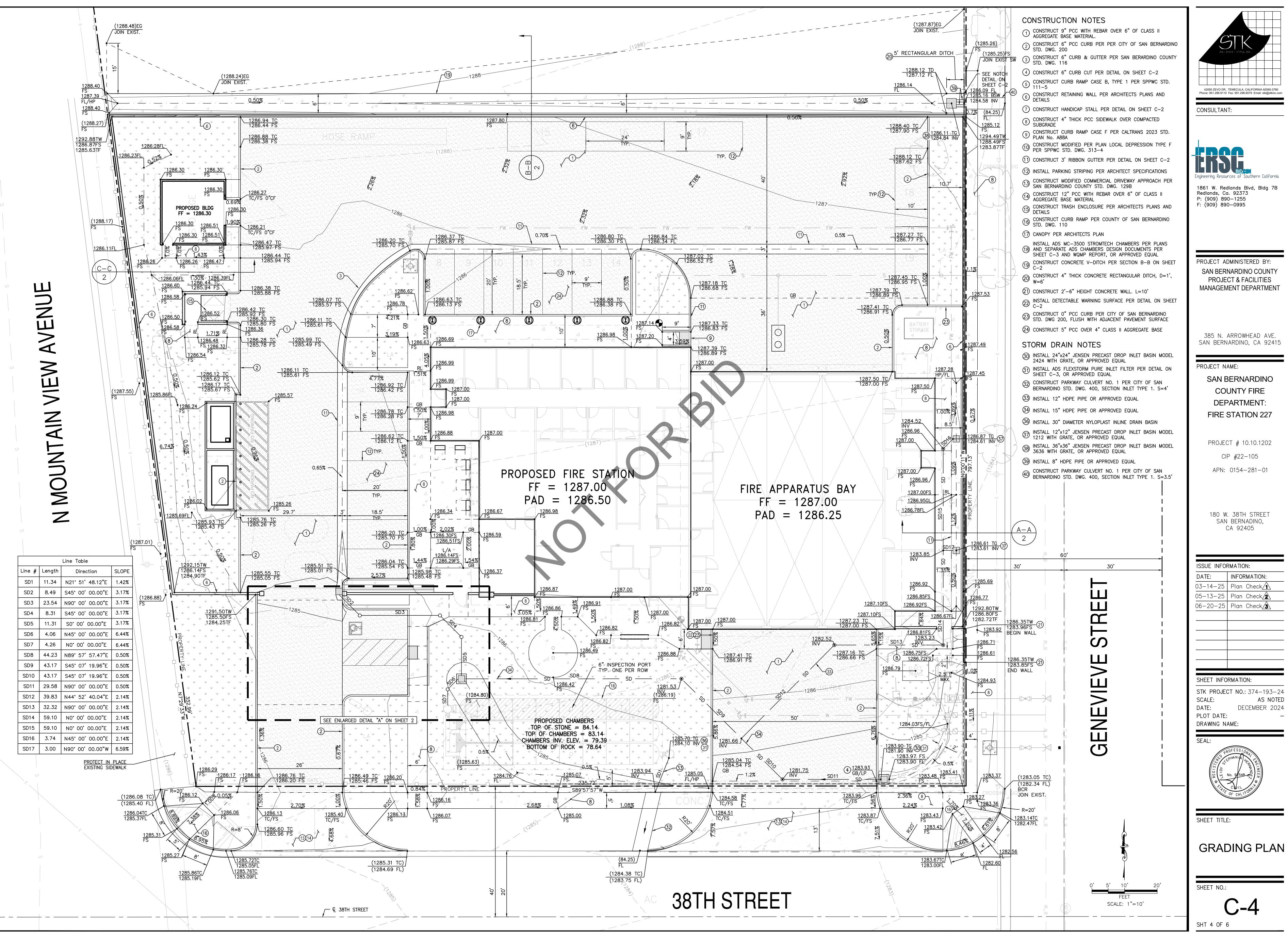
05-13-25 | Plan Check/**2** 06-20-25 | Plan Check/**3**

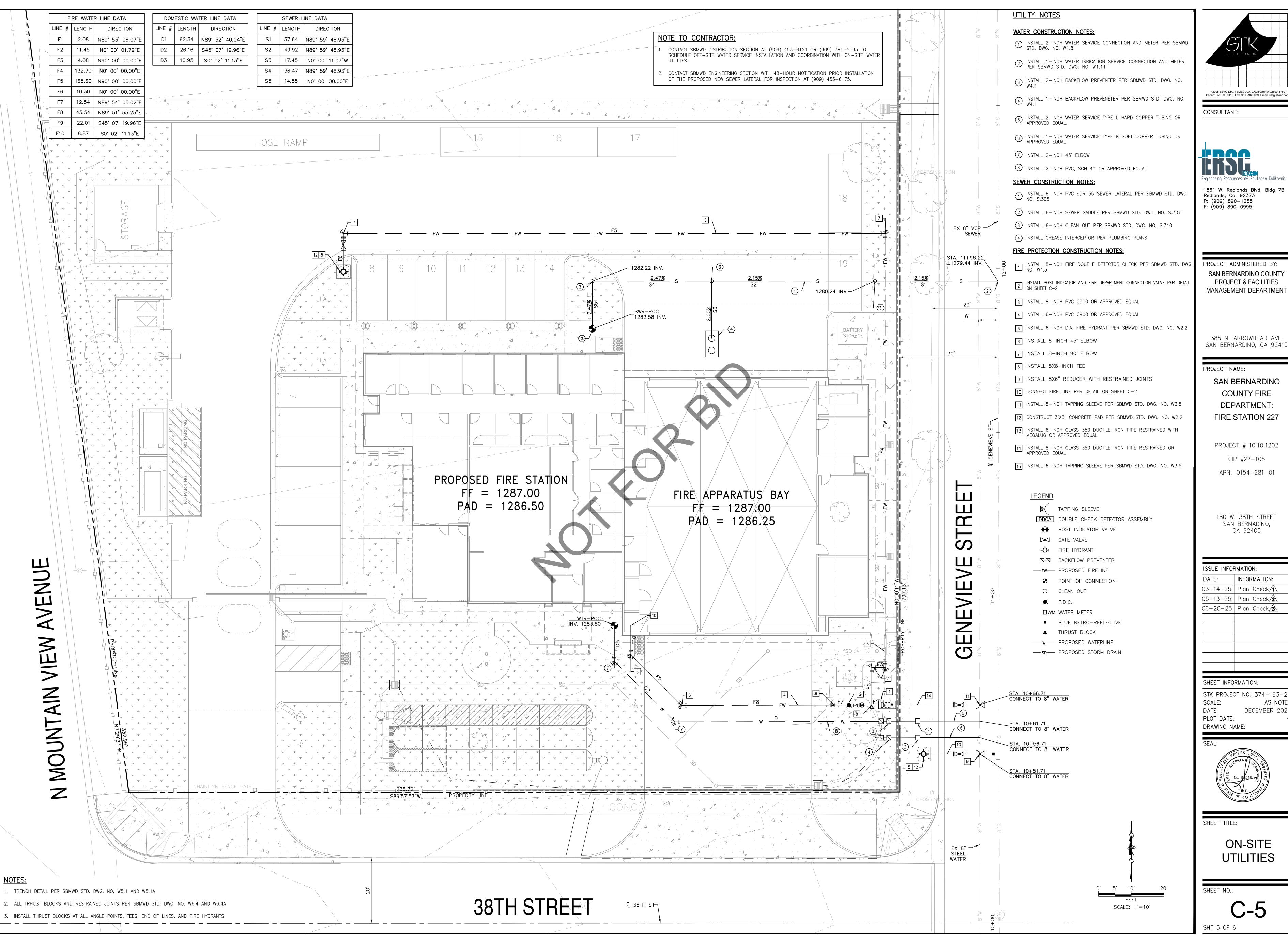
> SHEET INFORMATION: STK PROJECT NO.: 374-193-24 SCALE: AS NOTED

> DATE: DECEMBER 2024 PLOT DATE: DRAWING NAME:



DETAILS SHEET





42095 ZEVO DR., TEMECULA, CALIFORNIA 92590-3780

Engineering Resources of Southern California

1861 W. Redlands Blvd, Bldg 7B Redlands, Ca. 92373

PROJECT ADMINISTERED BY: SAN BERNARDINO COUNTY PROJECT & FACILITIES

385 N. ARROWHEAD AVE.

SAN BERNARDINO **COUNTY FIRE**

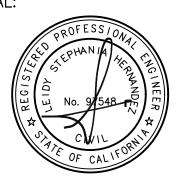
DEPARTMENT: FIRE STATION 227

CIP #22-105

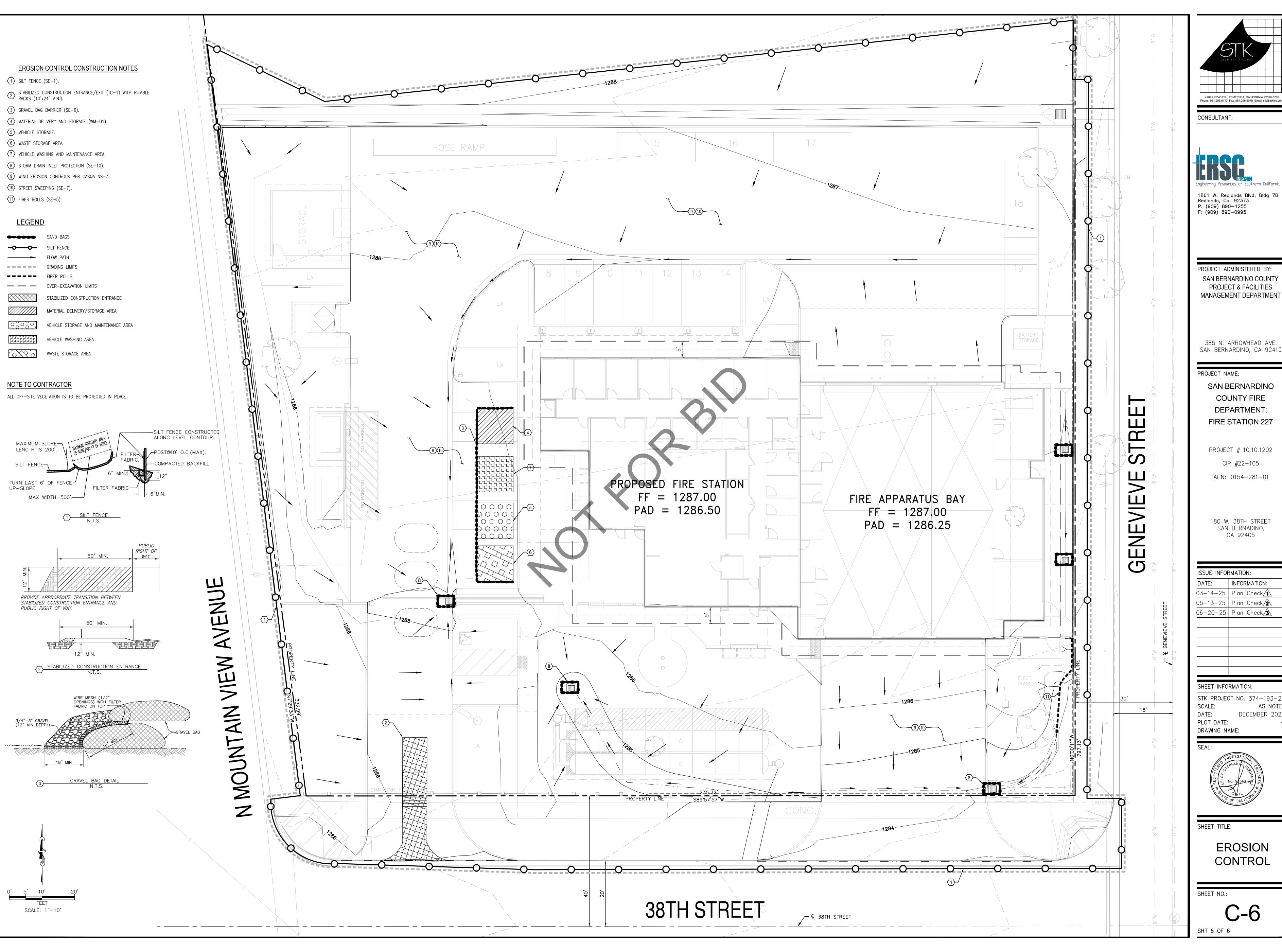
180 W. 38TH STREET

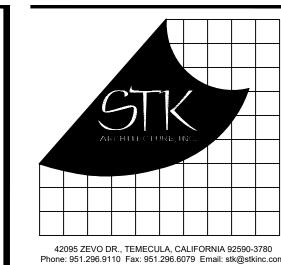
INFORMATION: 03-14-25 | Plan Check/1

SHEET INFORMATION: STK PROJECT NO.: 374-193-24 DECEMBER 2024



ON-SITE UTILITIES





CONSULTANT:

1861 W. Redlands Blvd, Bldg 7B Redlands, Ca. 92373 P: (909) 890-1255 F: (909) 890-0995

PROJECT ADMINISTERED BY: SAN BERNARDINO COUNTY PROJECT & FACILITIES

385 N. ARROWHEAD AVE. SAN BERNARDINO, CA 92415

PROJECT NAME:

SAN BERNARDINO **COUNTY FIRE** DEPARTMENT: **FIRE STATION 227**

PROJECT # 10.10.1202 CIP #22-105

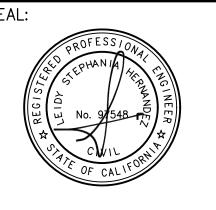
APN: 0154-281-01

180 W. 38TH STREET SAN BERNADINO, CA 92405

ISSUE INFORMATION: INFORMATION: 03-14-25 | Plan Check<u>1</u> 05-13-25 Plan Check **2**

SHEET INFORMATION:

STK PROJECT NO.: 374-193-24 SCALE: DATE: DECEMBER 2024 PLOT DATE:



EROSION CONTROL