

IMPERIAL BEACH, CALIFORNIA

10TH STREETSCAPE IMPROVEMENTS PROJECT

CITY OF IMPERIAL BEACH NOTES

1. THE APPROVAL OF THE PLANS BY THE CITY OF IMPERIAL BEACH DOES NOT AUTHORIZE THE CONTRACTOR TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERE TO (16 USC SECTION 1531 ET. SEQ.).
2. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER TO BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE 1-800-227-2600, TWO DAYS BEFORE YOU DIG.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS, WHICH ARE DISTURBED, OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR OR AN AUTHORIZED CIVIL ENGINEER. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL BENCHMARKS ARE TO BE DISTURBED OR DESTROYED, THE CITY OF IMPERIAL BEACH PUBLIC WORKS DIRECTOR (JUAN LARIOS) MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
4. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARK-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE PRE-CONSTRUCTION MEETING WITH THE CITY OF IMPERIAL BEACH PUBLIC WORKS DEPARTMENT (619) 423-8311.
5. CONTRACTOR SHALL IMPLEMENT AN EROSION CONTROL PROGRAM DURING THE PROJECT GRADING AND OR CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD, REGIONAL WATER CONTROL BOARD SAN DIEGO REGION AND THE CITY OF IMPERIAL BEACH MUNICIPAL CODE AND STORM WATER STANDARDS MANUAL.
6. ISSUANCE OF THE CITY'S NOTICE TO PROCEED SHALL NOT RELIEVE THE APPLICANT OR ANY OF THEIR REPRESENTATIVES OR CONTRACTORS FROM COMPLYING WITH ANY STATE OR FEDERAL REQUIREMENTS BY AGENCIES INCLUDING BUT NOT LIMITED TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, OR OTHER AGENCIES. COMPLIANCE MAY INCLUDE OBTAINING PERMITS, OTHER AUTHORIZATIONS, OR COMPLIANCE WITH MANDATES OF ANY APPLICABLE STATE/FEDERAL AGENCY.
7. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE ENGINEER AND APPROVED BY THE ENGINEER PRIOR TO ACCEPTANCE OF THE PROJECT BY THE CITY OF IMPERIAL BEACH.
8. DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED IN WRITING BY THE PUBLIC WORKS DIRECTOR AND THE CHANGE IS REQUIRED BY THE ENGINEER.
9. WHEN PERFORMING EXCAVATION WORK, CARE MUST BE TAKEN NOT TO ALLOW ANY DEBRIS TO ENTER ANY EXISTING SANITARY SEWER MANHOLES OR STORM DRAINS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DEBRIS THAT HAS ENTERED MANHOLES AND STORM DRAINS FROM HIS CONSTRUCTION AND WILL HAVE TO REMOVE SAME.
10. CONTRACTOR SHALL COORDINATE HIS SCHEDULE WITH THE CITY OF IMPERIAL BEACH PUBLIC WORKS AND EDCO DISPOSAL (619) 287-7555 FOR TRASH COLLECTION IN CONJUNCTION WITH CONSTRUCTION WORK.
11. CONTRACTOR SHALL LOCATE ALL UTILITIES WITHIN LIMITS OF WORK PRIOR TO CONSTRUCTION. FOR LOCATIONS OF UTILITIES CONTACT:
COX CABLE TV 1-800-262-1122
SAN DIEGO GAS & ELECTRIC CO. 1-800-411-7343
AT&T 1-800-288-2020
CALIFORNIA AMERICAN WATER CO. 1-619-522-6400
IMPERIAL BEACH PUBLIC WORKS (SEWER) 1-619-423-8311
12. THE CONTRACTOR SHALL NOTIFY THE SAN DIEGO GAS AND ELECTRIC COMPANY, AT&T, COX, AND CAL-AM PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND SHALL COORDINATE THEIR WORK WITH COMPANY REPRESENTATIVES. FOR LOCATION OF ELECTRIC CABLES, GAS PIPING, WATER LINES AND TELECOMMUNICATION CABLES AND APPURTENANCES, CONTACT UNDERGROUND SERVICE ALERT: 1-800-422-4133. ALSO, REFER TO CITY STANDARDS.
13. THE CONTRACTOR SHALL NOTIFY THE CITY OF IMPERIAL BEACH PUBLIC WORKS DEPARTMENT INSPECTOR 48 HOURS PRIOR TO STARTING WORK SO THAT INSPECTION MAY BE PROVIDED. (TELEPHONE NUMBER: 619-423-8311).
14. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2018 EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2018 EDITION OF STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION, AND 2018 THE SAN DIEGO COUNTY REGIONAL STANDARD DRAWINGS (SDRSD).
15. PAVEMENT SECTIONS SHOWN ARE TO BE VERIFIED BY "R" VALUE TESTS (TEST METHOD NO. CALIFORNIA 301) AND PAVEMENT DESIGN REPORT, TO BE SUBMITTED BY SOILS ENGINEER, FOR CITY ENGINEER'S APPROVAL.
16. ALL UNDERGROUND UTILITIES SHALL BE INSTALLED BEFORE CONSTRUCTION OF CURBS, CROSS GUTTERS, OR SURFACING OF THE STREETS AND SHALL BE MARKED FOR EASY LOCATION. THE ENGINEER OF WORK SHALL CERTIFY ALL IMPROVEMENTS TO WITHIN 0.1 FEET OF THE DESIGN.
17. SOILS REPORTS ON ALL TRENCHES SHALL BE SUBMITTED TO THE ENGINEER OF WORK AND THE CITY ENGINEER BY THE SOILS ENGINEER OF RECORD, WHICH CERTIFIES THAT TRENCH BACKFILL WAS COMPACTED AS DIRECTED BY THE SOILS ENGINEER IN ACCORDANCE WITH EARTHWORK SPECIFICATIONS AND CITY OF IMPERIAL BEACH SPECIFICATIONS AND GRADING ORDINANCE.
18. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE CURRENT STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL MANUAL AND SUPPLEMENTS (CALTRANS TRAFFIC CONTROL MANUAL); AND TRAFFIC CONTROL WARNING SIGNS, LIGHTS, AND DEVICES SHALL CONFORM TO THE 2010. CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CALIFORNIA MUTCD 2014, INCLUDING REVISIONS OF THE FHWA'S MUTCD 2003), DEPARTMENT OF TRANSPORTATION, DIVISION OF TRAFFIC OPERATIONS. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN, FOR APPROVAL BY THE DEPARTMENT OF PUBLIC WORKS, 48 HOURS PRIOR TO START OF CONSTRUCTION.
19. ALL EXISTING IMPROVEMENTS INCLUDING CURBS AND GUTTERS, SIDEWALKS, ASPHALT CONCRETE OR P.C.C. PAVING, WHICH ARE BEING JOINED OR MATCHED IN CONNECTION WITH THIS PROJECT, SHALL BE JOINED OR MATCHED IN A MANNER SATISFACTORY TO THE CITY PUBLIC WORKS INSPECTOR, INCLUDING NECESSARY SAW-CUTTING, REMOVAL, REPLACEMENT, AND INSTALLING APPLICABLE JOINTS.
20. ALL OPERATIONS CONDUCTED ON THE PREMISES, INCLUDING THE WARMING-UP, REPAIR, ARRIVAL, DEPARTURE, OR RUNNING OF TRUCKS, EARTHMOVING EQUIPMENT, CONSTRUCTION EQUIPMENT, AND ANY OTHER ASSOCIATED EQUIPMENT SHALL BE LIMITED TO THE PERIOD BETWEEN 7:00 A.M. AND 5:00 P.M. MONDAY THROUGH FRIDAY; AND, NO EARTHMOVING OR GRADING OPERATIONS SHALL BE CONDUCTED ON THE PREMISES ON SATURDAYS OR SUNDAYS OR LEGAL HOLIDAYS, UNLESS WAIVED BY THE PUBLIC WORKS DIRECTOR.

CIP S22107



VICINITY MAP
NO SCALE

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT 1-(800)-422-4133.



DIAL TOLL FREE
811
AT LEAST TWO DAYS
BEFORE YOU DIG

ENGINEER OF WORK:

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401 B Street, Suite 600, San Diego, California 92101
Phone: 619.234.9411 / www.kimley-horn.com

Nicholas J. Oleskowicz
NICHOLAS J. OLESKOWICZ R.C.E. 89464



10-11-2023
DATE

10TH STREETSCAPE IMPROVEMENTS PROJECT TITLE SHEET

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 1 OF 22 SHEETS

W.O. NO. CIP S22-107

FOR CITY ENGINEER					DATE	DIVISION HEAD
DESCRIPTION	BY	APPROVED	DATE	FILMED		
ORIGINAL	KH					DESIGN ENGINEER
						NAD 83 COORDINATES
						LAMBERT COORDINATES
CONTRACTOR		DATE STARTED				
INSPECTOR		DATE COMPLETED				

S22-107- 1 -D

Plotted By:Rokosz, Cody Sheet Set:Kha Layout:Layout1 October 11, 2023 04:09:22pm \\SND\FP01\CA_SND\1\SND\MUNI\95243012 - 10th Streetscape Improvements\Design\Plan Sheets\243012-GK.dwg

LEGEND - EXISTING

DESCRIPTION	SYMBOL
RIGHT OF WAY	
EXISTING WATER LINE	
EXISTING SEWER LINE	
EXISTING GAS LINE	
EXISTING POWER POLE	
EXISTING ELECTRICAL PULL BOX	
EXISTING WATER METER	
EXISTING SIGN	
EXISTING BOLLARD	
EXISTING WATER VALVE	
EXISTING NATURAL GAS VALVE	
EXISTING FIRE HYDRANT	
EXISTING MONUMENT	
EXISTING CONTOUR LINE	
EXISTING FENCE	
EXISTING RETAINING WALL	
EXISTING ELEVATION	(XX.XX)

DEMOLITION NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTION TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF ANY OF THESE NOTES AND THE CITY WILL NOT BE RESPONSIBLE FOR THE ENFORCEMENT.

- UNLESS OTHERWISE SHOWN ON PLANS, CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS WITHIN THE PROJECT GRADING LIMITS AND REMOVE ALL IMPEDANCES FOR THE PROPOSED FACILITIES.
- THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND HORIZONTAL/VERTICAL LOCATION OF ALL UTILITIES WITHIN THE PROJECT AREA THAT MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THAT ANY UTILITIES SHOWN TO BE RELOCATED BY OTHERS HAVE BEEN RELOCATED AND ARE NO LONGER IN CONFLICT. IMMEDIATELY NOTIFY THE ENGINEER OF ANY REMAINING UTILITY CONFLICTS PRIOR TO THE START OF ANY DEMOLITION WORK.
- THE CONTRACTOR SHALL MAINTAIN EXISTING ELECTRICAL CIRCUITS FOR EQUIPMENT NOT REMOVED DURING DEMOLITION.
- THE CONTRACTOR SHALL MAINTAIN EXISTING IRRIGATION FOR ALL AREAS NOT REMOVED DURING CONSTRUCTION.
- EXISTING WATER METERS AND FIRE HYDRANTS SHALL REMAIN IN OPERATION UNTIL NEW SYSTEMS ARE OPERATIONAL. SEE IMPROVEMENT PLANS.
- THE LIMITS OF FULL DEPTH PAVEMENT REHABILITATION (AC & AB) ARE SHOWN FOR BIDDING PURPOSES ONLY. FINAL LIMITS ARE TO BE DETERMINED IN THE FIELD WITH THE PROJECT CONSTRUCTION MANAGER PRIOR TO COMMENCING FULL DEPTH PAVEMENT DEMOLITION OPERATIONS.
- IF A PRIVATE WALL FOOTING IS EXPOSED DURING DEMOLITION THAT WILL CONFLICT WITH THE PROPOSED CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE ENGINEER OF WORK IMMEDIATELY.
- CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL VEGETATION, SHRUBS AND TREES IDENTIFIED WITH "PROTECT IN PLACE" ON THE DEMOLITION AND IMPROVEMENT PLANS.
- ANY IRRIGATION THAT IS REMOVED DURING THE REMOVAL AND DISPOSAL OF VEGETATION SHALL BE CAPPED IN A MANNER THAT THE REMAINING PORTIONS OF THE SYSTEM ARE NOT COMPROMISED.
- CONTRACTOR SHALL NOT IMPACT OVERHEAD UTILITY LINES AT ANYTIME DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING THE OVERHEAD UTILITY LINES PRIOR TO MOBILIZATION AND CONSTRUCTION.
- IF SDG&E POLE IS SUBJECT TO BE COMPROMISED, REFER TO SDG&E OVERHEAD ELECTRICAL STANDARD ON PAGE 372 FOR TEMPORARY POLE SUPPORT.
- EXISTING IRRIGATION LATERAL LINES, HEADS, WIRING AND ALL OTHER ASSOCIATED EQUIPMENT IMPACTED BY THE PROJECT CONSTRUCTION SHALL BE CAREFULLY CUT, CAPPED AND RELOCATED TO EXISTING LANDSCAPE AREAS. PRIOR TO COMPLETION, CONTRACTOR SHALL ENSURE THAT ALL EXISTING IRRIGATION SYSTEMS IMPACTED ARE IN FULL WORKING ORDER WITH COMPLETE HEAD TO HEAD COVERAGE INCLUDING NO OVERSPRAY ONTO HARDSCAPE SURFACES. ANY IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN LIKE KIND BY THE CONTRACTOR.
- PROPOSED SAWCUT OF CONCRETE FACILITIES SHOULD BE REPLACED FROM JOINT TO JOINT.

LEGEND - PROPOSED

DESCRIPTION	SDRSD STANDARD DWG/DETAIL	SYMBOL
PROPOSED SAWCUT	-	
PROPOSED FLOWLINE	-	
DAYLIGHT LINE	-	
PROPOSED CONTOUR	-	
GRADE BREAK	-	
PROPOSED ELEVATION	-	XX.XX
PROPOSED CONCRETE (INCLUDES SIDEWALKS AND OTHER SURFACES)	G-07, 09, 10, & G-12	
PROPOSED CONCRETE DRIVEWAY	G-14B	
PROPOSED AC PAVEMENT SECTION	-	
PROPOSED LANDSCAPING	-	
PROPOSED CURB RAMP TYPE 'A'	G-27	
PROPOSED CURB RAMP TYPE 'D'	G-31	
PROPOSED PCC CURB & GUTTER	G-02	
PROPOSED PCC CURB	G-01	
PROPOSED CONCRETE GRAVITY RETAINING WALL (TYPE A)	C-09, C-10	
PROPOSED PEDESTRIAN PROTECTIVE RAILING AND HANDRAIL	M-24, M-25	
PROPOSED GREEN GUTTER BMP	-	
PROPOSED WATER LINE	-	

SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK.

- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER, ENGINEER AND GEOLOGIST HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
- THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND HORIZONTAL/VERTICAL LOCATION OF ALL EXISTING FACILITIES (ABOVE GROUND AND UNDERGROUND) WITHIN THE PROJECT SITE SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT THE REVISION OF THE CONSTRUCTION PLANS IF IT IS FOUND THE ACTUAL LOCATIONS ARE IN CONFLICT WITH THE PROPOSED WORK. VERIFY THAT ANY UTILITIES SHOWN TO BE RELOCATED BY OTHERS HAVE BEEN RELOCATED AND ARE NO LONGER IN CONFLICT. IMMEDIATELY NOTIFY THE ENGINEER OF ANY REMAINING UTILITY CONFLICTS PRIOR TO THE START OF ANY DEMOLITION WORK.
- CONTRACTOR SHALL IDENTIFY ALL VALVES, MANHOLES, AND SURVEY MONUMENTS IN THE AREAS OF WORK PRIOR TO COMMENCING WORK AND SHALL PROTECT THOSE FACILITIES IN-PLACE. ANY SUCH FACILITIES DISTURBED BY THE CONTRACTOR SHALL BE RESET AND/OR ADJUSTED AS DIRECTED BY THE ENGINEER AND FACILITY OWNER AT CONTRACTOR'S SOLE COST AND EXPENSE, INCLUDING ALL COSTS OF RESETTNG OR ADJUSTING PERFORMED BY THE FACILITY OWNER.
- WORK PERFORMED WITHOUT BENEFIT OF TESTING AND/OR INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL AT THE CONTRACTOR'S SOLE EXPENSE.
- THE EXISTING LOCATION OF UTILITY STRUCTURES AND FACILITIES SHOWN ON THE CONSTRUCTION PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. ATTENTION IS CALLED TO THE POSSIBLE EXISTENCE OF OTHER UTILITY FACILITIES OR STRUCTURES THAT MAY NOT BE SHOWN. THE CONTRACTOR HAS THE TOTAL RESPONSIBILITY IN VERIFYING THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES, AND DISCREPANCIES BETWEEN THE PLANS AND THE ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE DESIGN ENGINEER IMMEDIATELY.
- NEITHER THE CITY NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS.
- THE CONTRACTOR SHALL MAINTAIN A CONTINUOUS ADA ACCESSIBLE ROUTE FOR ALL PEDESTRIANS, INCLUDING THE DISABLED AND BICYCLISTS AT ALL TIMES DURING CONSTRUCTION. WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, THE TEMPORARY FACILITIES SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
- SIDEWALK WEAKENED PLANE JOINTS ARE REQUIRED EVERY 5 FEET EACH WAY AND SHALL BE IN ACCORDANCE WITH REGIONAL STANDARD DRAWING G-09 AND THESE PLANS. EXPANSION JOINTS ARE REQUIRED EVERY 15 FEET AND SHALL BE IN ACCORDANCE WITH REGIONAL STANDARD DRAWING G-10 AND THESE PLANS. THEY SHALL BE PLACED IN A STRAIGHT LINE, COMPLETELY THROUGH THE CONCRETE TO THE SUBGRADE AND TO EACH EDGE OF PAVING. CONCRETE SHALL BE CURED IN ACCORDANCE WITH THE 2018 STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK).
- CONSTRUCTION EXPANSION JOINTS IN CURB AND GUTTER AT RETURNS AND AT DRIVEWAY INTERSECTIONS ARE REQUIRED PER SDRSD G-9 AND G-10.
- PATCHING OF SIDEWALK IS NOT PERMITTED.
- DAMAGED, GOUGED, BROKEN, OR GRAFFITI-MARKED SECTIONS OF CURBS, GUTTERS OR SIDEWALKS SHALL BE REMOVED AND REPLACED.
- A MINIMUM REPLACEMENT SECTION TO BE AT LEAST EQUAL TO SCORE MARK (TYPICALLY 5 FEET X 5 FEET). FOR SIDEWALKS EXCEEDING 5 FEET WIDTH, REPLACEMENT IS TO BE FULL WIDTH SQUARED TO THE NEXT SCORE MARK.
- ALL WATER VALVE CANS AND RISERS ON THE CITY'S OPERATIONAL SYSTEM WILL BE ADJUSTED TO GRADE.
- ALL SEWER MANHOLES ON THE CITY'S OPERATIONAL SYSTEM WILL BE ADJUSTED TO GRADE.
- LANDSCAPING SHALL BE REPLACED WITH IN-KIND (SOD, ROCK MULCH, ETC.) AS SHOWN ON PLANS.
- SIDEWALK TRANSITION PANEL TO BE BUILT TO EXISTING JOINT.
- PROPOSED CONCRETE CROSS CUTTER, SIDEWALK, GUTTER PAN, AND ALLEY APRON SHALL BE DOWELED TO EXISTING CONCRETE STRUCTURES PER THE SDRSD G-10, WITH 18" LONG NUMBER 4 REBARS SPACED AT 24" ON CENTER.

ABBREVIATIONS

AC	ASPHALT CONCRETE
APN	ASSESSOR'S PARCEL NUMBER
ASTM	AMERICAN SOCIETY OF TESTING MATERIAL
AVE	AVENUE
BC	BEGIN HORIZONTAL CURVE
BEG	BEGIN
BFP	BACKFLOW PREVENTER
BMP	BEST MANAGEMENT PRACTICE
CA	CALIFORNIA
CAL AM	CALIFORNIA AMERICAN WATER
CL	CENTERLINE
CLR	CLEAR
CLSM	CONTROLLED LOW STRENGTH MATERIALS
℄	CENTERLINE
CONC	CONCRETE
C&G	CURB AND GUTTER
DIA	DIAMETER
E	EASTING
EB	EASTBOUND
EC	END HORIZONTAL CURVE
ECAB	ELECTRIC CABINET
EG	EXISTING GRADE
ELEC	ELECTRICAL
EPB	ELECTRIC PULL BOX
ESM	ENGINEERED SOIL MEDIA
EX	EXISTING
EXIST	EXISTING
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FS	FINISHED SURFACE
GAL	GALLON
GPM	GALLONS PER MINUTE
GB	GRADE BREAK
GV	GAS VALVE
GUY	GUY WIRE
HT	HEIGHT
ICV	IRRIGATION CONTROL VALVE
I.D.	IDENTIFICATION
IE OR INV	INVERT ELEVATION
I.N.	INCHES
L	LENGTH, LEFT
LF	LINEAR FEET
LS	LANDSCAPE
LT	LEFT
MAX	MAXIMUM
ME	MATCH EXISTING
MIN	MINIMUM
MM	MILLIMETER
MOD	MODIFIED
MV	MASTER VALVE
N	NORTHING
NE	NORTHEAST
NO.	NUMBER
NTS	NOT TO SCALE
O.P.	ON CENTER
OHE	OVERHEAD ELECTRIC
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PP	POWER POLE
PRC	POINT OF REVERSE CURVE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVE
PVMT	PAVEMENT
QC	QUICK COUPLING
QTY	QUANTITY
R	RADIUS, RIGHT
RCV	REMOTE CONTROL VALVE
RT	RIGHT
R/W	RIGHT OF WAY
S	SEWER
SCH	SCHEDULE
SDRSD	SAN DIEGO REGIONAL STANDARD DRAWING
SF	SQUARE FEET
SNS	STREET NAME SIGN
STA	STATION
SW	SIDEWALK
TC	TOP OF CURB
TD	TOP OF DRAIN
TR	TOP OF RAMP
TYP	TYPICAL
UD	UNDERDRAIN
W	WATER
WM	WATER METER
WV	WATER VALVE

DESIGN ENGINEER'S NOTES

- THE TERM "DESIGN ENGINEER" USED HEREIN SHALL MEAN THE ENGINEER WHO HAS SIGNED AND SEALED THESE PLANS AND IS IN RESPONSIBLE CHARGE OF THE ENGINEERING DESIGN. THE TERM "CONTRACTOR" USED HEREIN SHALL MEAN ANY GENERAL CONTRACTOR OR SUBCONTRACTOR USING THESE PLANS. ANY AGENCY SIGNATURE OR APPROVAL ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF ANY OF THESE NOTES.
- THE DESIGN ENGINEER WILL NOT PROVIDE, OBSERVE, COMMENT ON NOR ENFORCE ANY SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY MEASURES AND SHALL BE SOLELY RESPONSIBLE FOR SAME AND COMPLYING WITH ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS. THE CONTRACTOR AGREES THAT SHE/HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS AND SAFETY OF ALL PERSONS AND PROPERTY DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- THE DESIGN ENGINEER SHALL HAVE NO RESPONSIBILITY FOR ANY OF THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION, TECHNIQUES, EQUIPMENT CHOICE AND USAGE, SEQUENCE, SCHEDULE, SAFETY PROGRAMS, OR SAFETY PRACTICES, NOR SHALL THE DESIGN ENGINEER HAVE ANY AUTHORITY OR RESPONSIBILITY TO STOP OR DIRECT THE WORK OF ANY CONTRACTOR.
- THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE DESIGN ENGINEER AND OWNER, THEIR AGENTS AND EMPLOYEES, HARMLESS FROM ANY AND ALL CLAIMS, DEMANDS, JUDGMENTS, LOSS, DAMAGES, COSTS, EXPENSES, FEES OR LIABILITY WHATSOEVER, REAL OR ALLEGED, IN CONNECTION WITH, IN WHOLE OR IN PART, DIRECTLY OR INDIRECTLY, THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE DESIGN ENGINEER.
- IF THERE ARE ANY QUESTIONS REGARDING THESE PLANS, THE CONTRACTOR SHALL REQUEST IN WRITING FROM THE DESIGN ENGINEER AND THE OWNER, AN INTERPRETATION BEFORE DOING ANY RELATED OR IMPACTED WORK.
- THE CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO PROTECT THE PROPERTY FROM ANY EROSION AND SILTATION THAT RESULT FROM CONTRACTOR OPERATIONS BY APPROPRIATE MEANS UNTIL SUCH TIME THAT THE PROJECT IS COMPLETED AND ACCEPTED FOR MAINTENANCE BY WHOMEVER IS TO BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO STARTING WORK NEAR THEIR FACILITIES AND SHALL COORDINATE WORK WITH UTILITY COMPANY REPRESENTATIVES.
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM A SEARCH OF READILY AVAILABLE RECORDS. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ALL DAMAGES THERETO CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE APPROPRIATE SPECIFICATIONS AND STANDARDS AT THE SOLE EXPENSE OF THE CONTRACTOR.
- THE LOCATION, ELEVATIONS, SIZE, TYPE AND CONDITION OF EXISTING IMPROVEMENTS ADJACENT TO THE PROPOSED WORK INDICATED ON THESE PLANS SHALL BE CONFIRMED BY THE CONTRACTOR BY FIELD MEASUREMENTS AND OBSERVATIONS PRIOR TO CONSTRUCTION OF NEW WORK. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DESIGN ENGINEER IN WRITING IF ANY DISCREPANCIES OR CONFLICTING INFORMATION IS FOUND.
- THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES AS NEEDED, SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY DUE TO THE ACTUAL LOCATION, SIZE, TYPE, OR CONDITION OF EXISTING FACILITIES DIFFERING FROM WHAT IS SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ANY DAMAGE TO THE EXISTING IMPROVEMENTS AND REPLACEMENT TO THE SATISFACTION OF THE OWNER.
- SHOULD CONFLICTING INFORMATION BE FOUND ON THE PLANS THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IN WRITING IMMEDIATELY BEFORE PROCEEDING WITH THE WORK IN QUESTION.
- ANYTHING MENTIONED IN THE SPECIFICATIONS, IF ANY, AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH.

UNSUITABLE SUBGRADE

- IF SUBGRADE COMPACTION PER SECTION 7 OF THE SPECIAL PROVISIONS CANNOT BE REACHED AFTER TRUE COMPACTION EFFORT IS PLACED, 8" OF UNSUITABLE SUBGRADE SHALL BE REMOVED AND LEVELED, A STABILIZING GRID MATERIAL SUCH AS TENSAR TX-7, MIRAFI HP370, OR APPROVED EQUAL, SHALL BE PLACED, IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, ON THE NEW SUBGRADE AND 8" SECTION OF RECYCLED CLASS II BASE SHALL BE PLACED IN TWO 4" LIFTS AND COMPACTED TO 95%.
- AT ALL EDGES OF THE STABILIZING GRID MATERIAL, THERE SHOULD BE AN OVERLAP OF 12" OF THE STABILIZING GRID MATERIAL.

ENGINEER OF WORK:

Kimley»Horn Kimley-Horn
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Phone: 619.234.9411 / www.kimley-horn.com

NICHOLAS J. OLESKOWICZ R.C.E. 89464



10-11-2023
DATE

10TH STREETSCAPE IMPROVEMENTS PROJECT
LEGEND AND GENERAL NOTES

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 2 OF 22 SHEETS

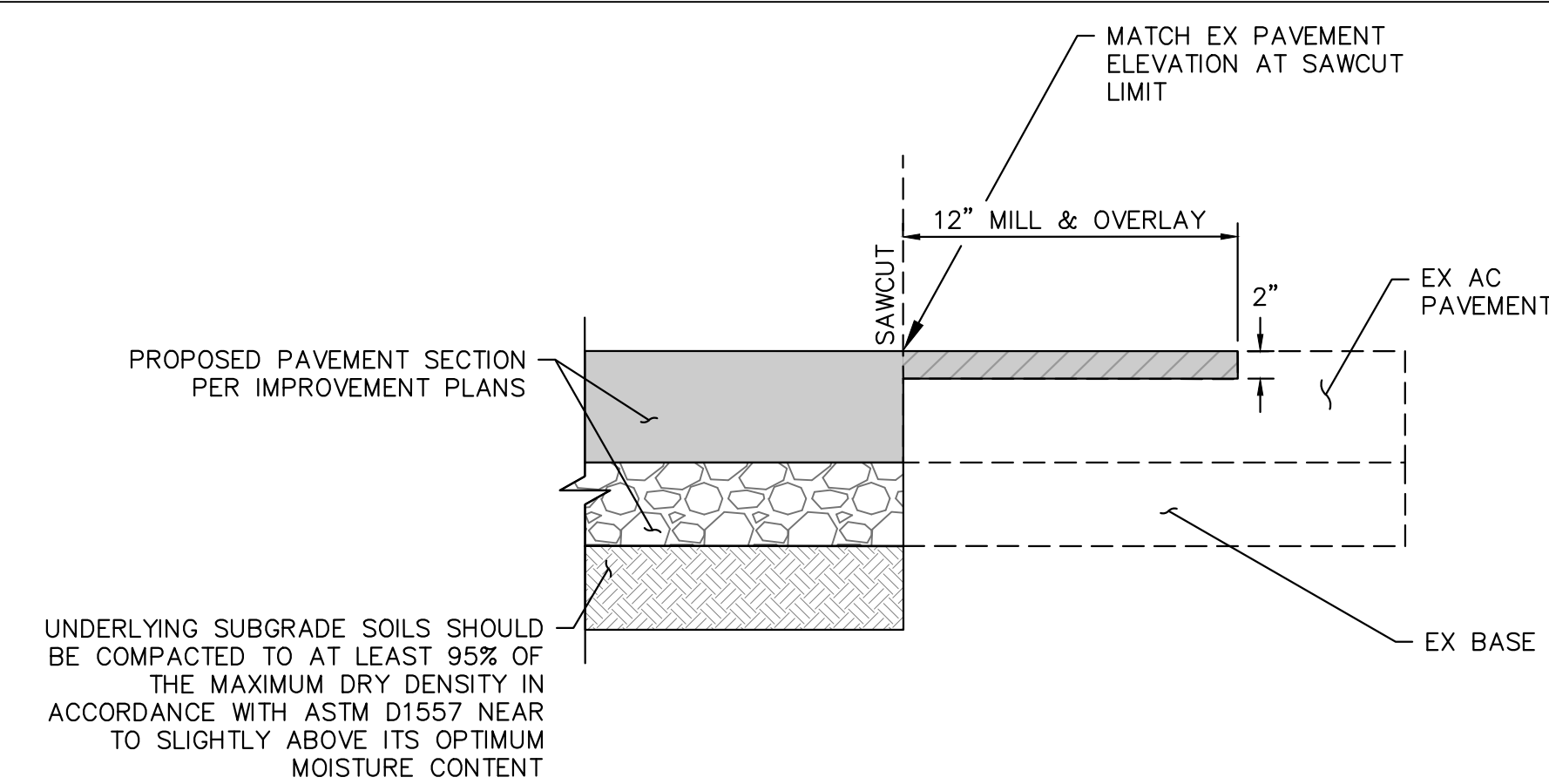
W.O. NO. CIP S22-107

FOR CITY ENGINEER		DATE			DIVISION HEAD
DESCRIPTION	BY	APPROVED	DATE	FILMED	
ORIGINAL	KH				DESIGN ENGINEER
					NAD 83 COORDINATES
					LAMBERT COORDINATES

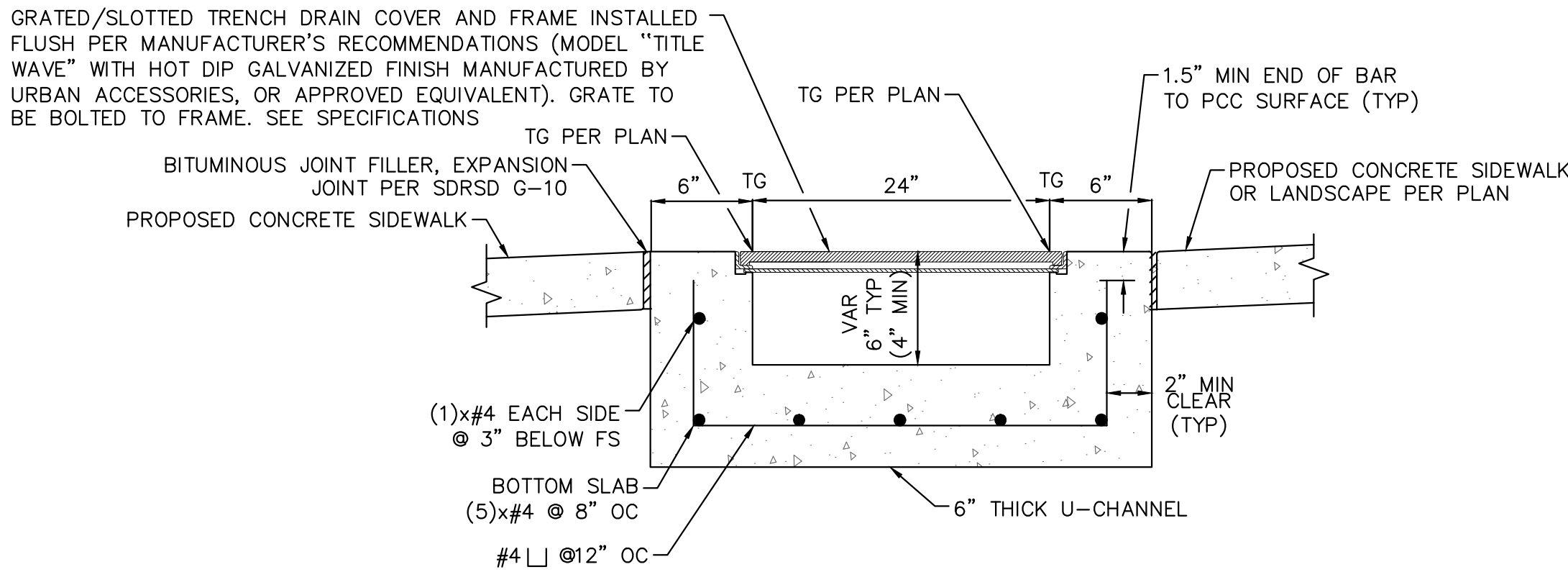
CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____
S22-107- 2 -D

BID SET PLANS - NOT FOR CONSTRUCTION

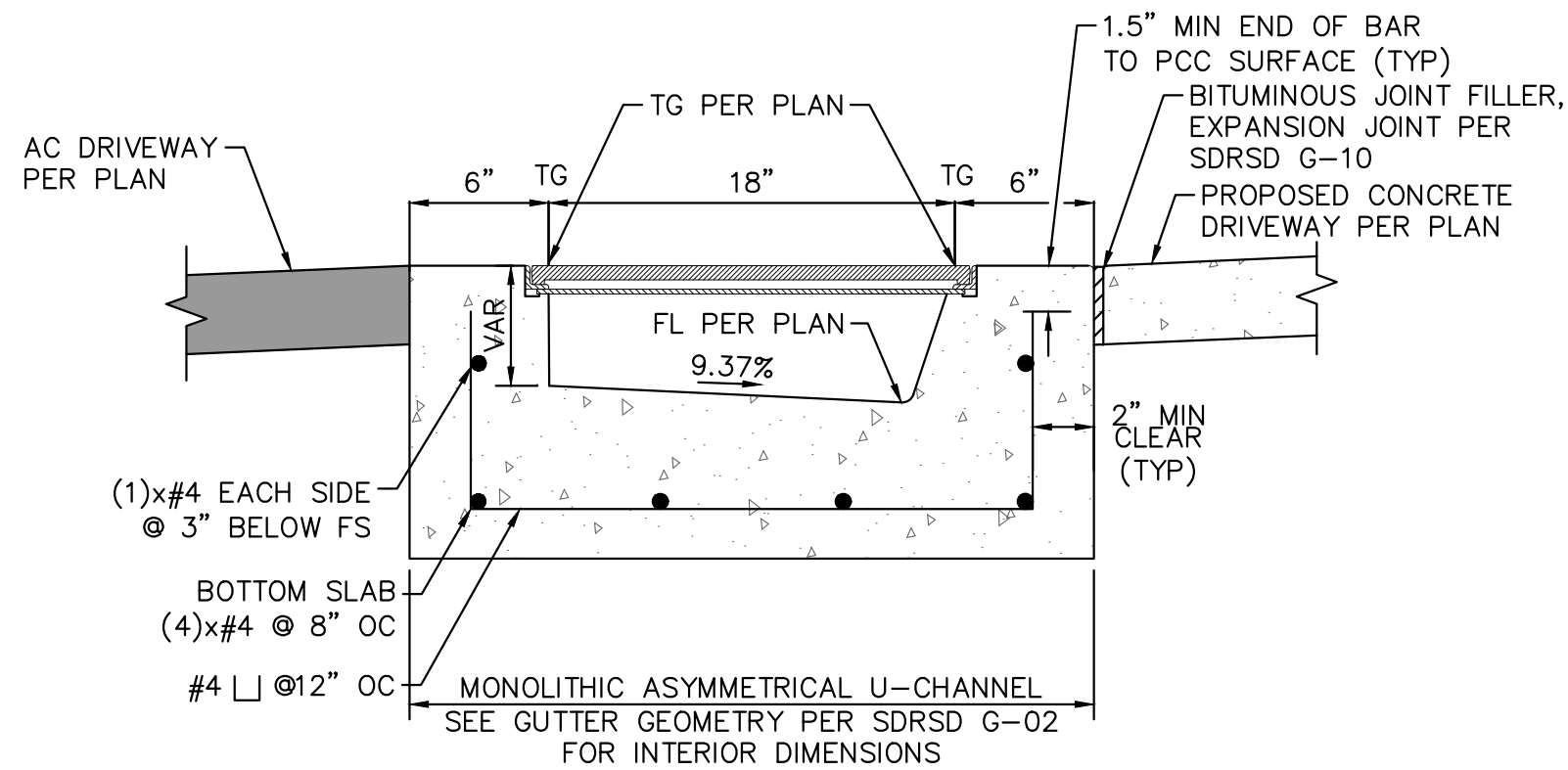
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A ROADWAY SAWCUT AND SLOT PATCH DETAIL
NOT TO SCALE

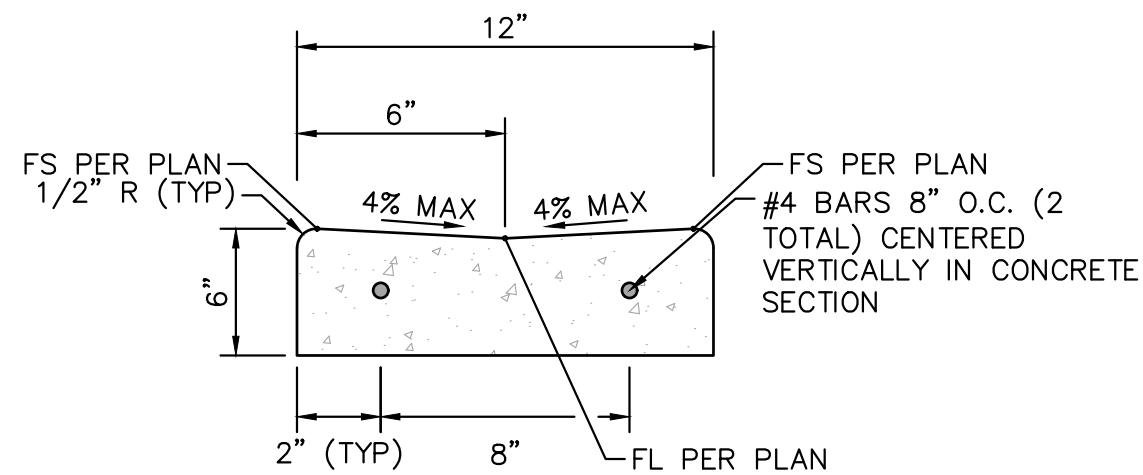


SECTION: SINGLE TRENCH DRAIN WITHIN SIDEWALK



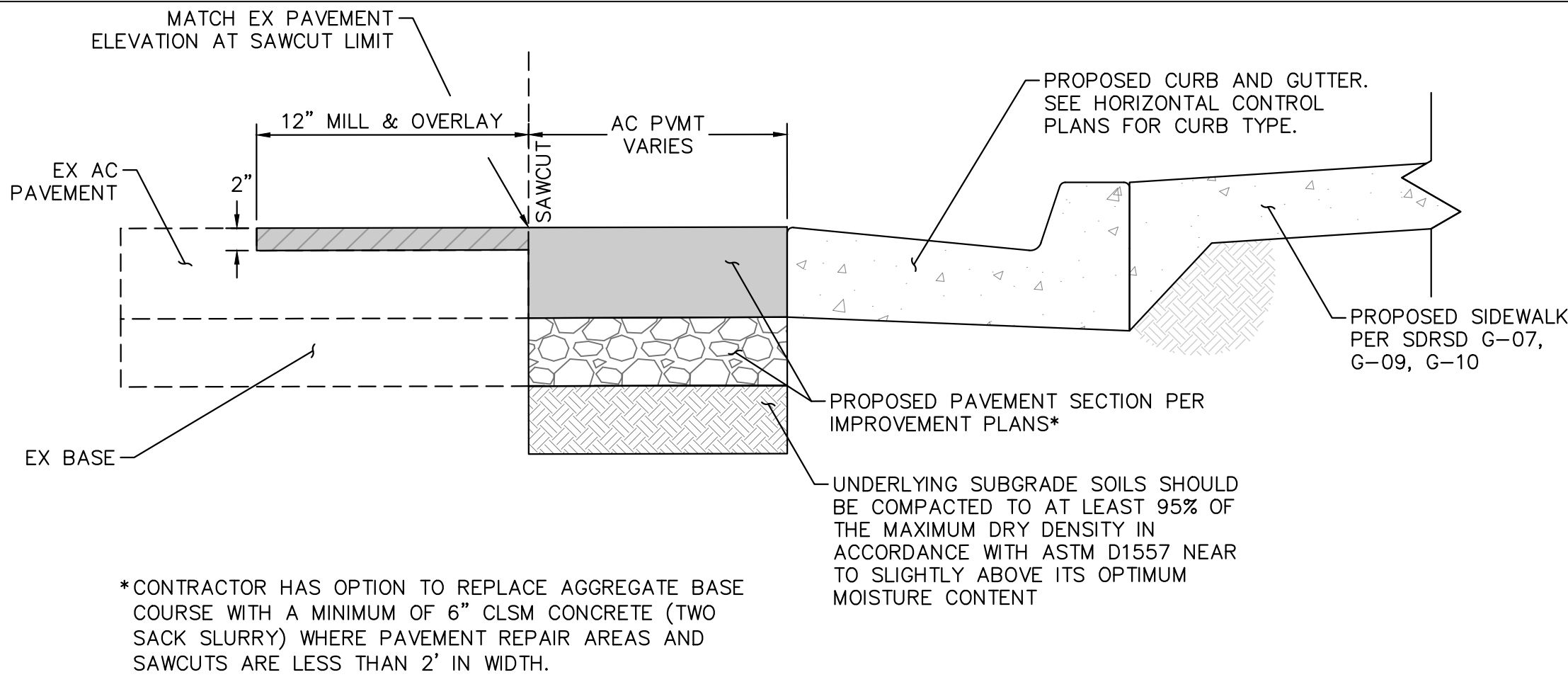
SECTION: SINGLE TRENCH DRAIN AT DRIVEWAY

C TRENCH DRAIN DETAILS
NOT TO SCALE



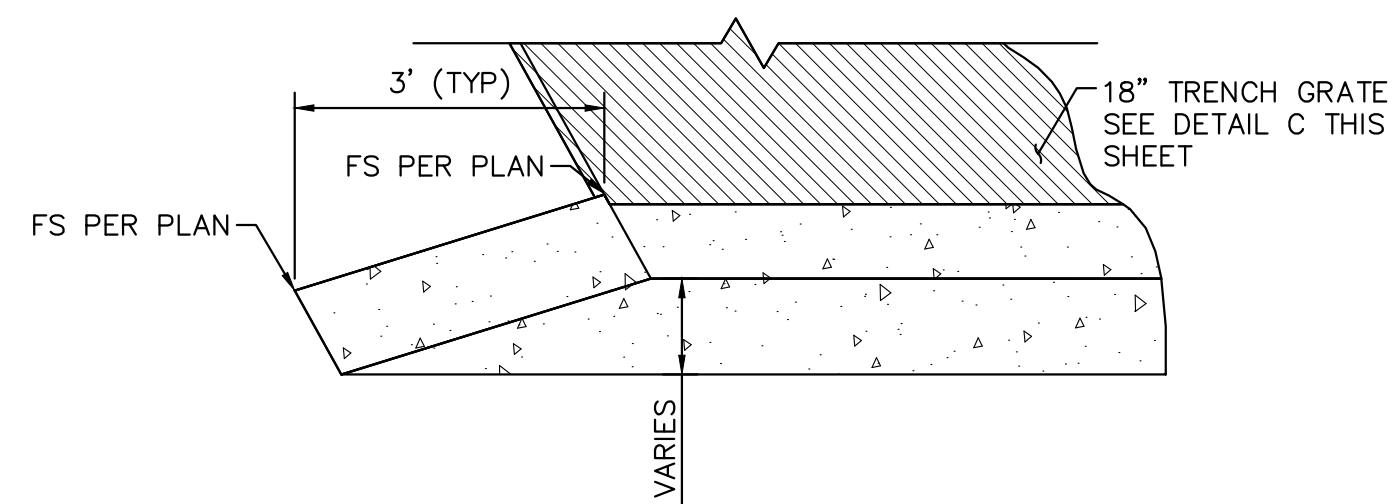
G 1 FT RIBBON GUTTER DETAIL
NOT TO SCALE

- NOTES:
1. CONCRETE SHALL BE 560-C-3250.
 2. SUBGRADE PREPARATION PER GEOTECHNICAL RECOMMENDATIONS.

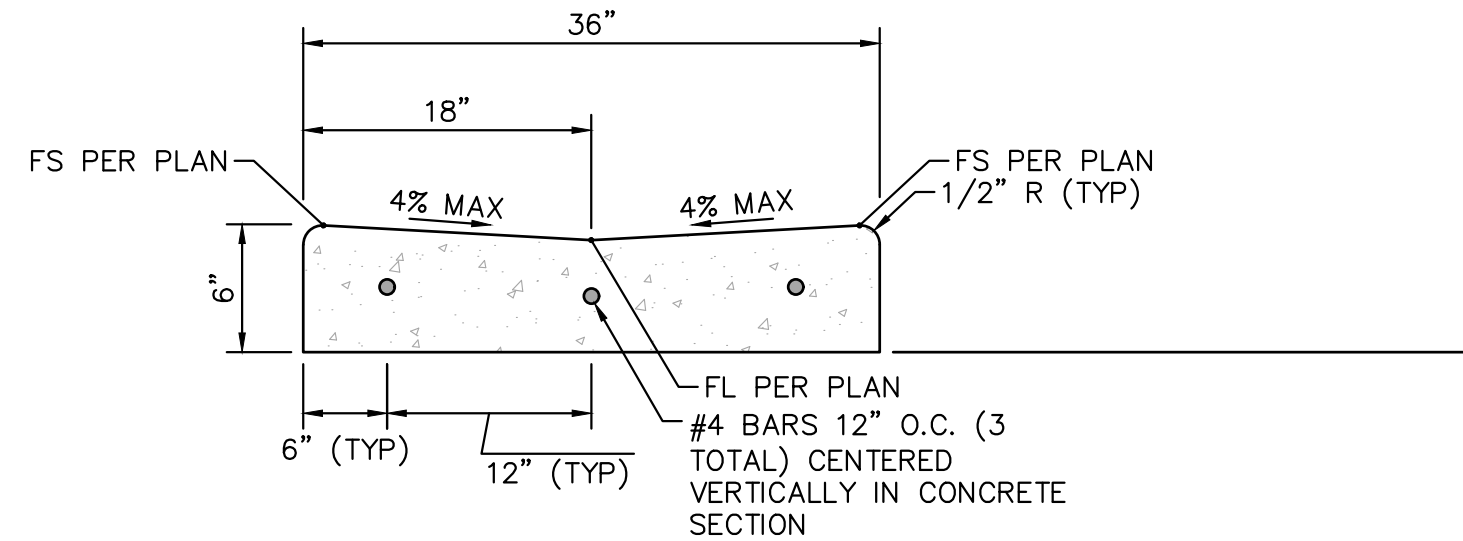


- NOTES:
1. CONCRETE SHALL BE 520-C-2500.
 2. SEE SDRSD G-09 AND G-10 FOR JOINTING DETAILS.

B VARIABLE HEIGHT CURB AND GUTTER DETAIL
NOT TO SCALE



E CURB TRANSITION DETAIL
NOT TO SCALE



- NOTES:
1. CONCRETE SHALL BE 560-C-3250.
 2. SUBGRADE PREPARATION PER GEOTECHNICAL RECOMMENDATIONS.
 3. PCC SURFACE SLOPE TO BE 1.5% MAX AT ACCESSIBLE PARKING STALLS. TRANSITION BETWEEN 1.5% AND 4% TO TAKE PLACE OUTSIDE ACCESSIBLE PARKING STALL, TRANSITION LENGTH TO BE 2' MINIMUM.

F 3 FT RIBBON GUTTER DETAIL
NOT TO SCALE

**10TH STREETSCAPE IMPROVEMENTS PROJECT
CONSTRUCTION DETAILS**

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 3 OF 22 SHEETS

W.O. NO. CIP S22-107

FOR CITY ENGINEER		DATE		DIVISION HEAD	
DESCRIPTION	BY	APPROVED	DATE	FILMED	DESIGN ENGINEER
ORIGINAL	KH				
					NAD 83 COORDINATES
					LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

S22-107- 3 -D

ENGINEER OF WORK:

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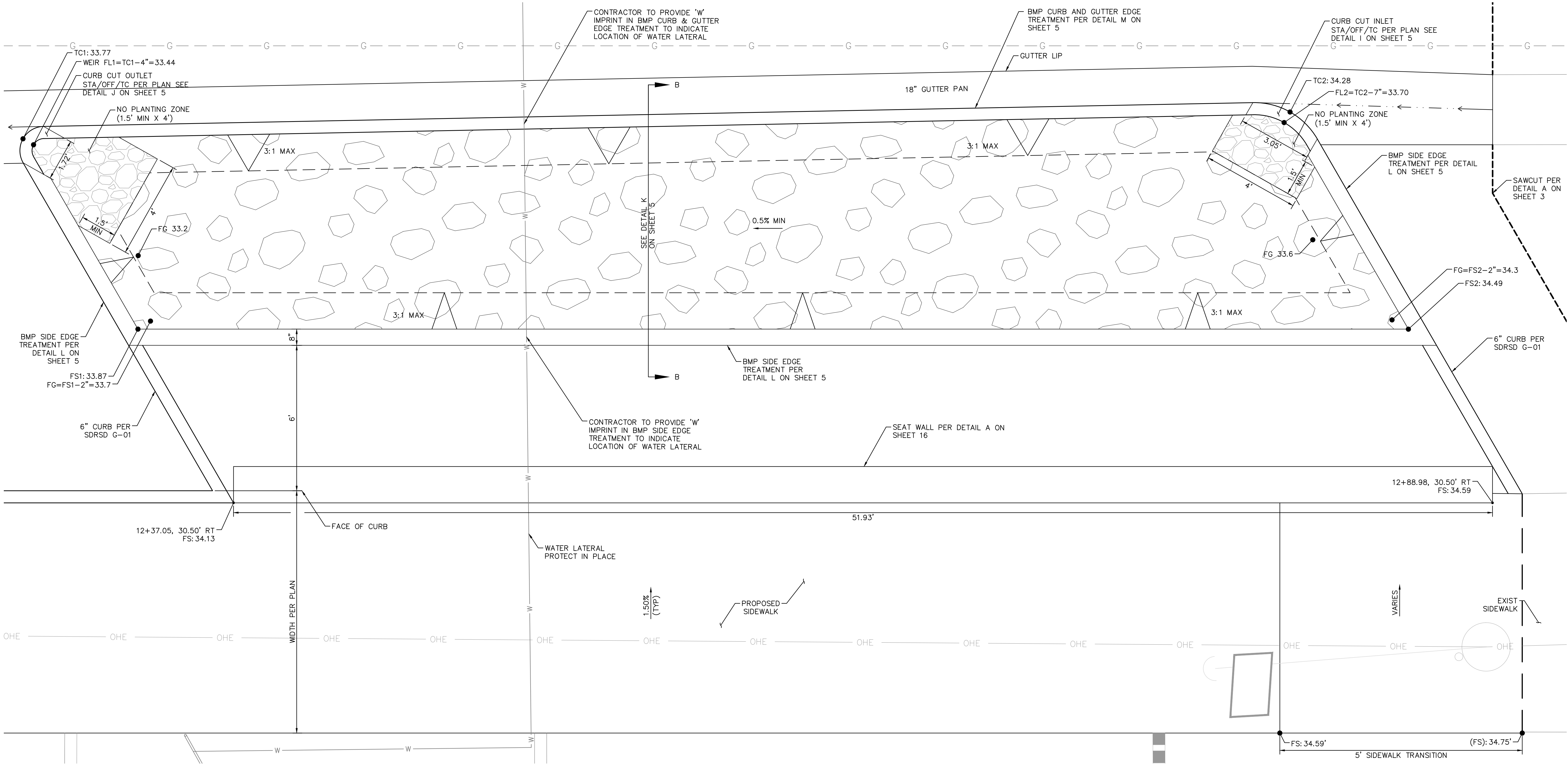
Nicholas J. Oleskowicz
NICHOLAS J. OLESKOWICZ R.C.E. 89464



10-11-2023
DATE

BID SET PLANS - NOT FOR CONSTRUCTION

Plotted By: Rokosz, Cody Sheet Set: Kha Layout: DT02 October 11, 2023 04:09:47pm \\SND\FP01\CA_SND\1\SND\MUNI\195243012 - 10th Streetscape Improvements\Design\Plan Sheets\243012-DT01.dwg



H GREEN GUTTER BMP: PLAN VIEW
NOT TO SCALE

ENGINEER OF WORK:

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Nicholas J. Oleskiewicz
NICHOLAS J. OLESKOWICZ R.C.E. 89464



10-11-2023
DATE

**10TH STREETSCAPE IMPROVEMENTS PROJECT
CONSTRUCTION DETAILS**

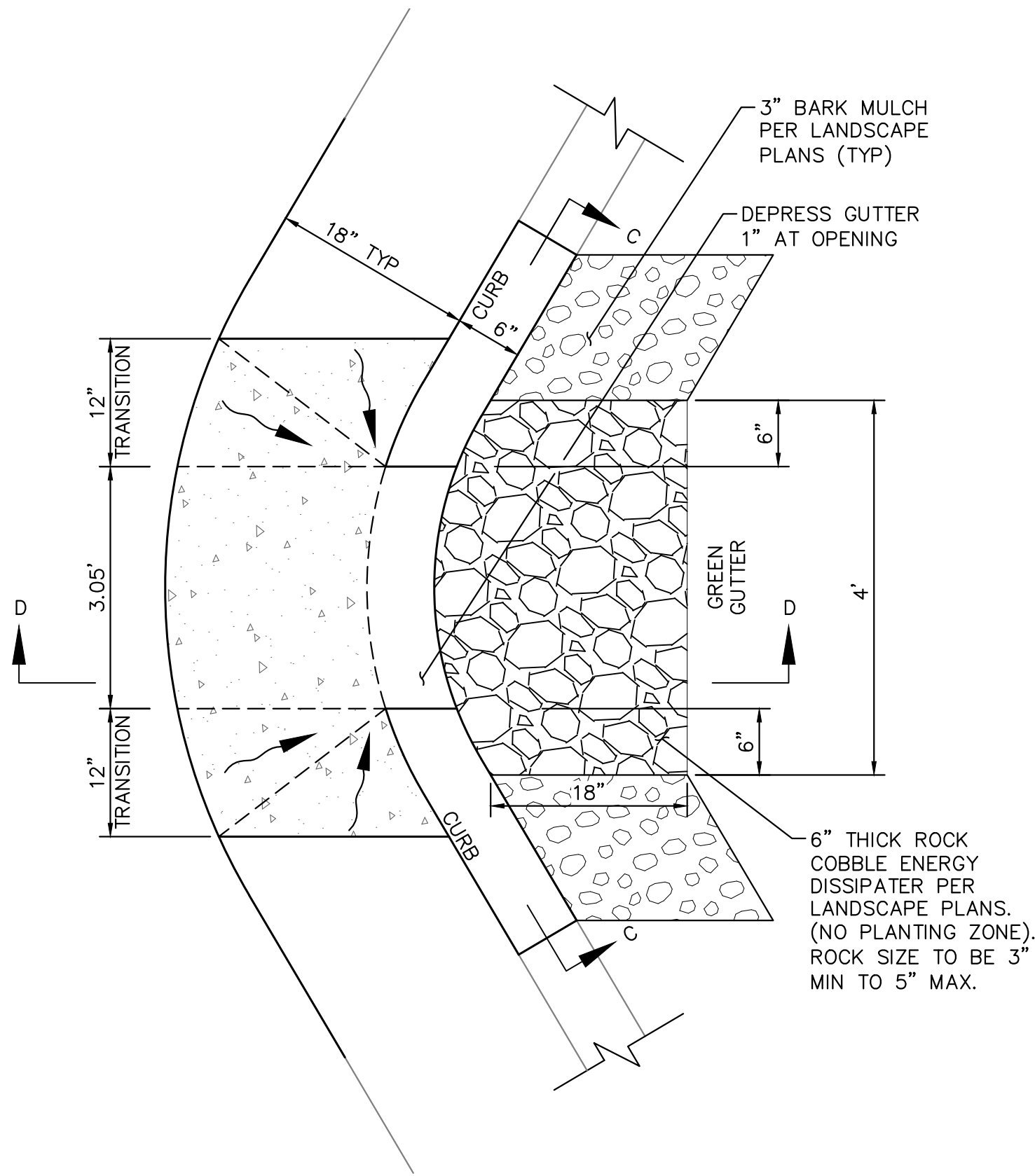
CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 4 OF 22 SHEETS

W.O. NO. CIP S22-107

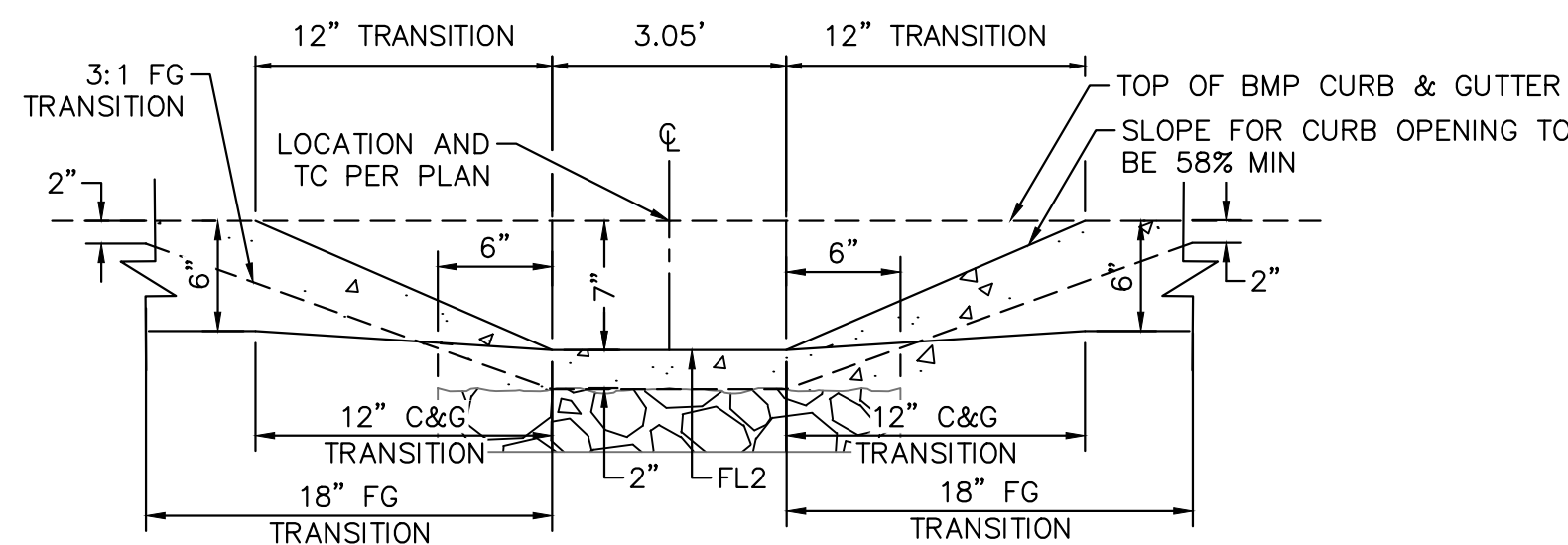
FOR CITY ENGINEER		DATE			DIVISION HEAD
DESCRIPTION	BY	APPROVED	DATE	FILMED	
ORIGINAL	KH				DESIGN ENGINEER
					NAD 83 COORDINATES
					LAMBERT COORDINATES
CONTRACTOR		DATE STARTED		S22-107- 4 -	
INSPECTOR		DATE COMPLETED			

BID SET PLANS - NOT FOR CONSTRUCTION

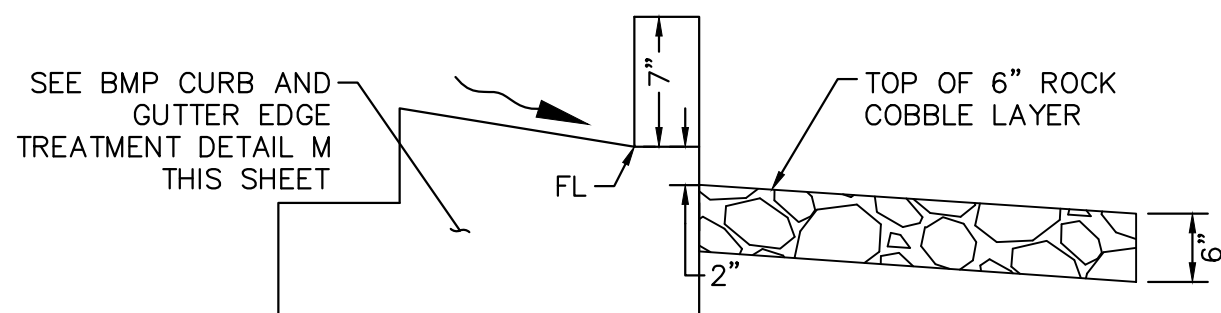
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PLAN VIEW

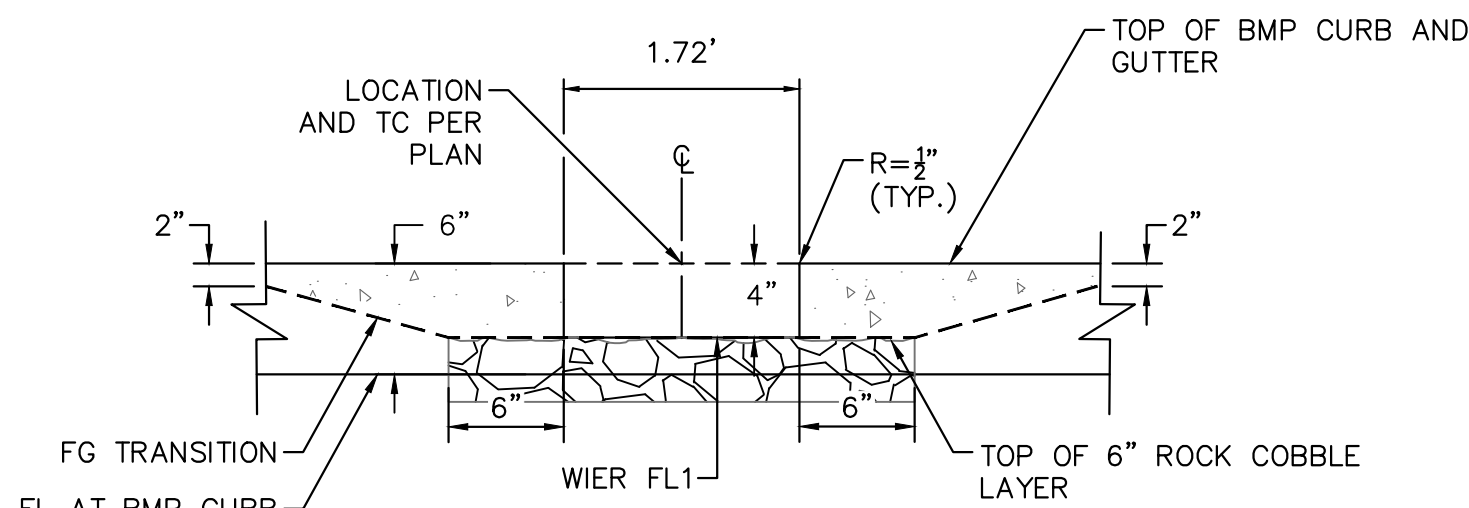


SECTION C-C

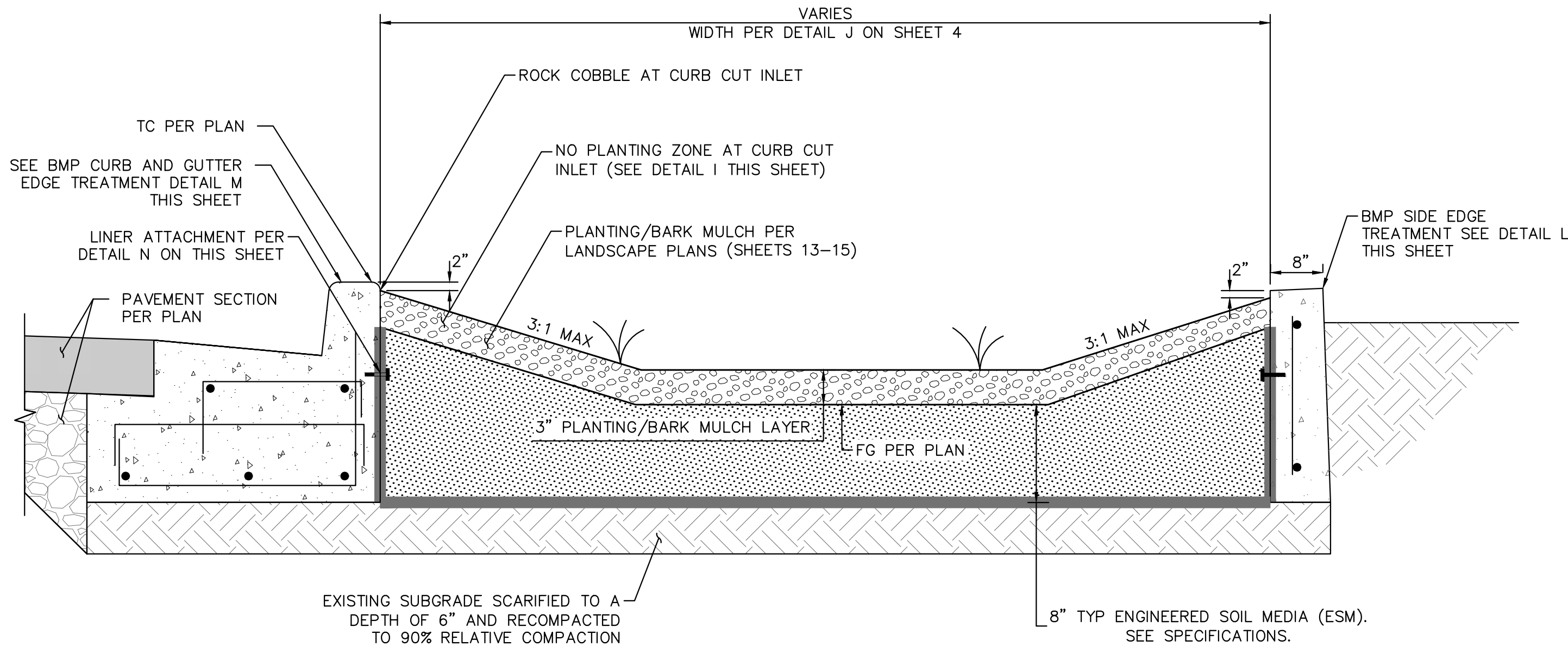


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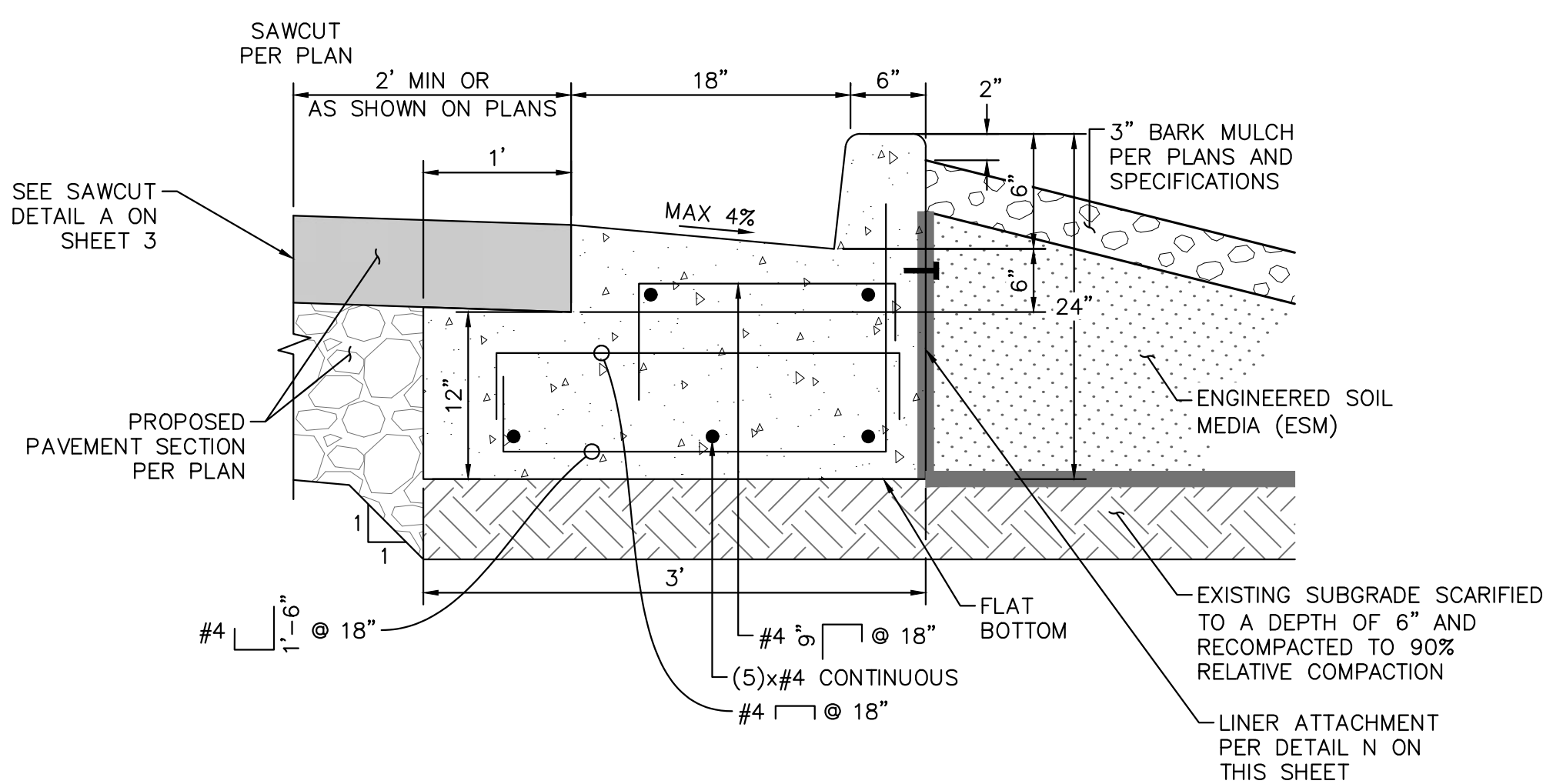
I CURB CUT INLET DETAIL
NOT TO SCALE



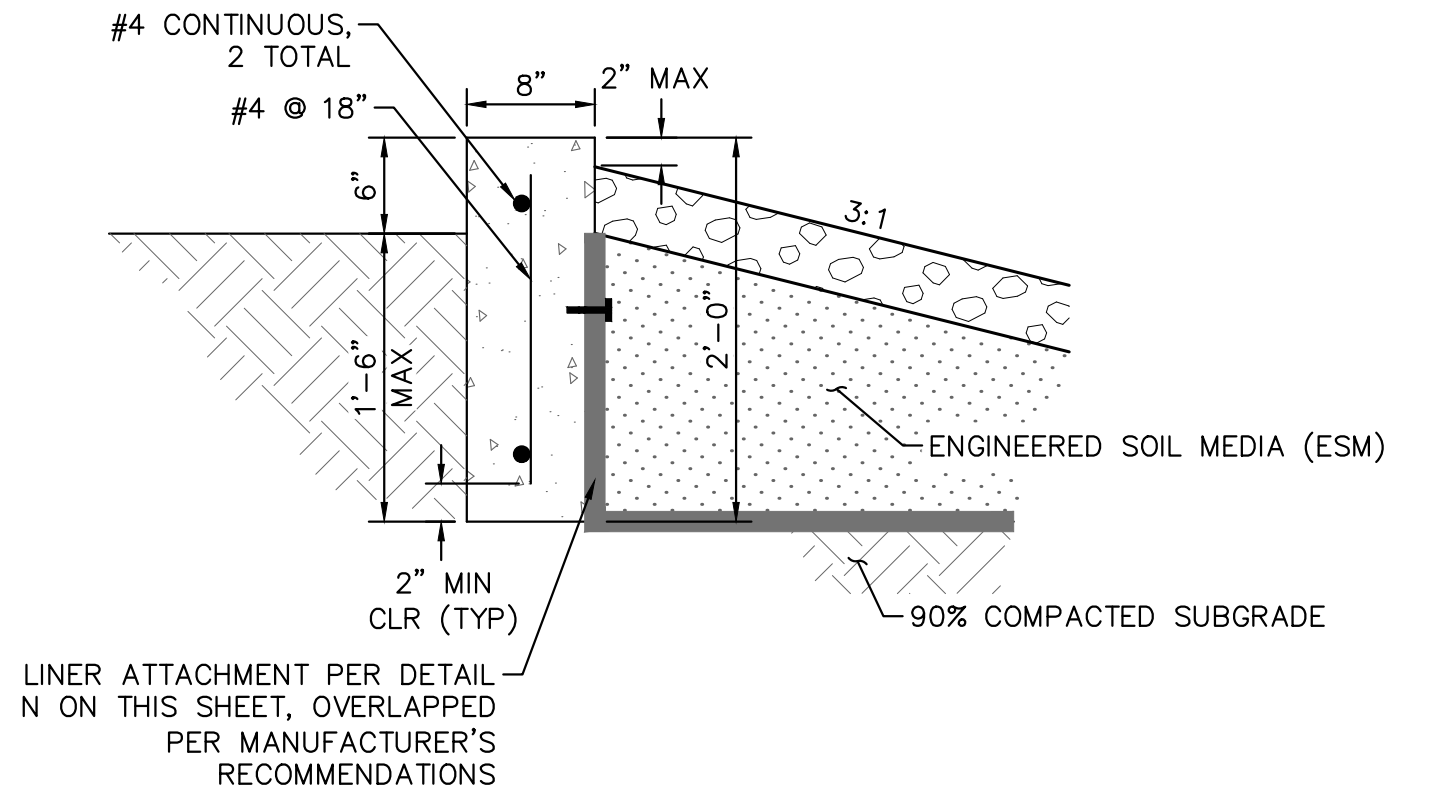
J CURB CUT OUTLET DETAIL
NOT TO SCALE



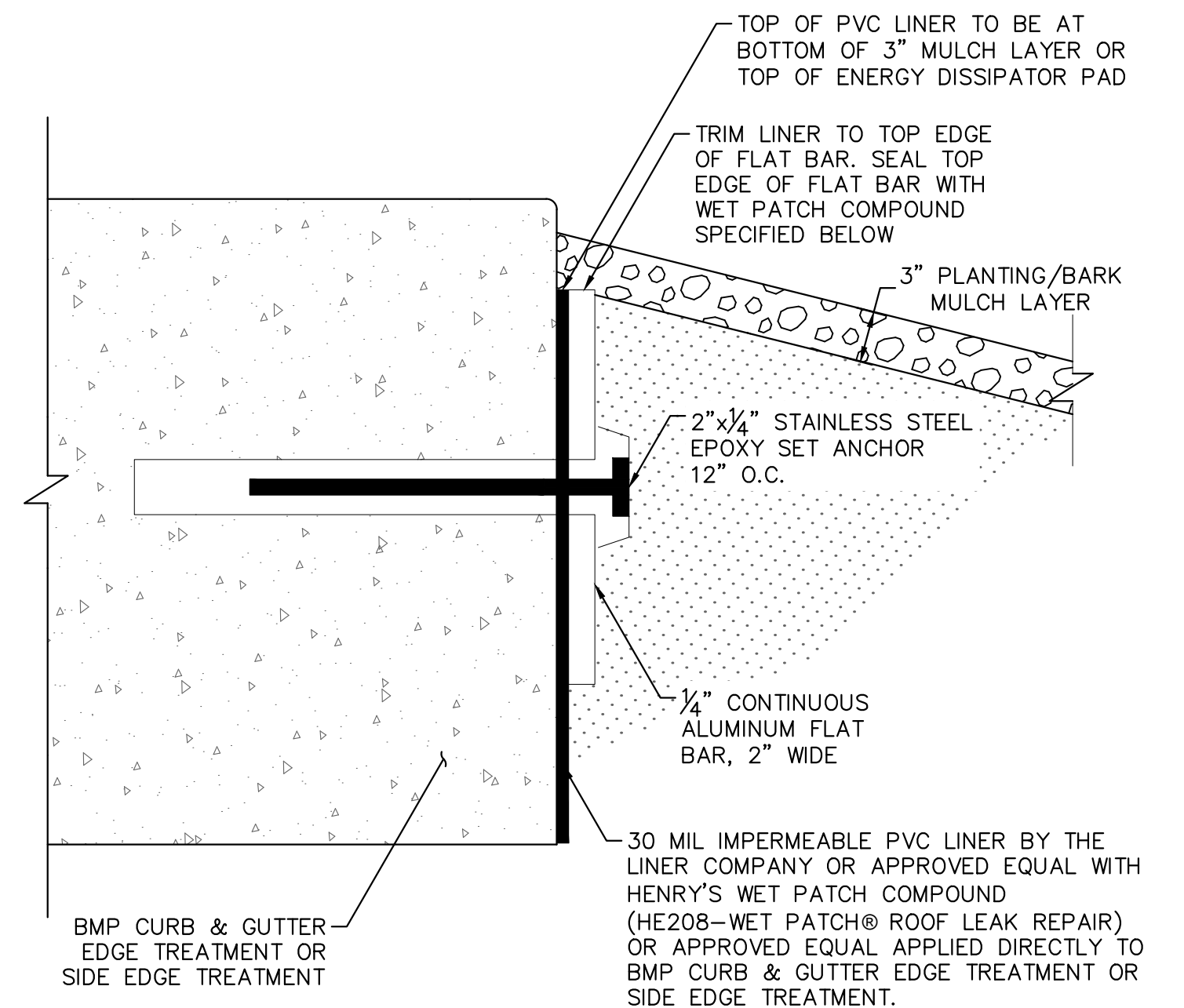
K GREEN GUTTER BMP
SECTION B-B
NOT TO SCALE



M BMP CURB AND GUTTER EDGE TREATMENT DETAIL
NOT TO SCALE



L BMP SIDE EDGE TREATMENT DETAIL
NOT TO SCALE



N LINER ATTACHMENT DETAIL
NOT TO SCALE

10TH STREETSCAPE IMPROVEMENTS PROJECT
CONSTRUCTION DETAILS

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 5 OF 22 SHEETS

W.O. NO. CIP S22-107

FOR CITY ENGINEER					DATE	DIVISION HEAD
DESCRIPTION	BY	APPROVED	DATE	FILMED		
ORIGINAL	KH					DESIGN ENGINEER
						NAD 83 COORDINATES
						LAMBERT COORDINATES
CONTRACTOR		DATE STARTED				
INSPECTOR		DATE COMPLETED				

S22-107- 5 -D

ENGINEER OF WORK:

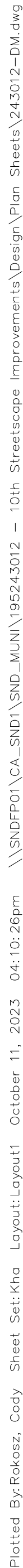
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NICHOLAS J. OLESKOWICZ R.C.E. 89464

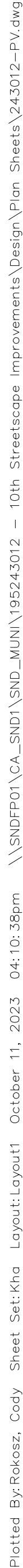


10-11-2023
DATE

BID SET PLANS - NOT FOR CONSTRUCTION

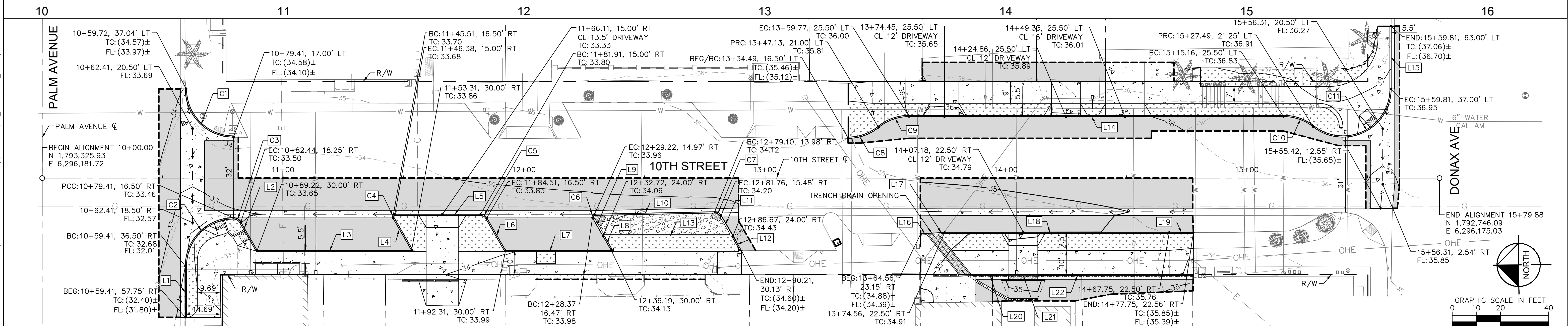
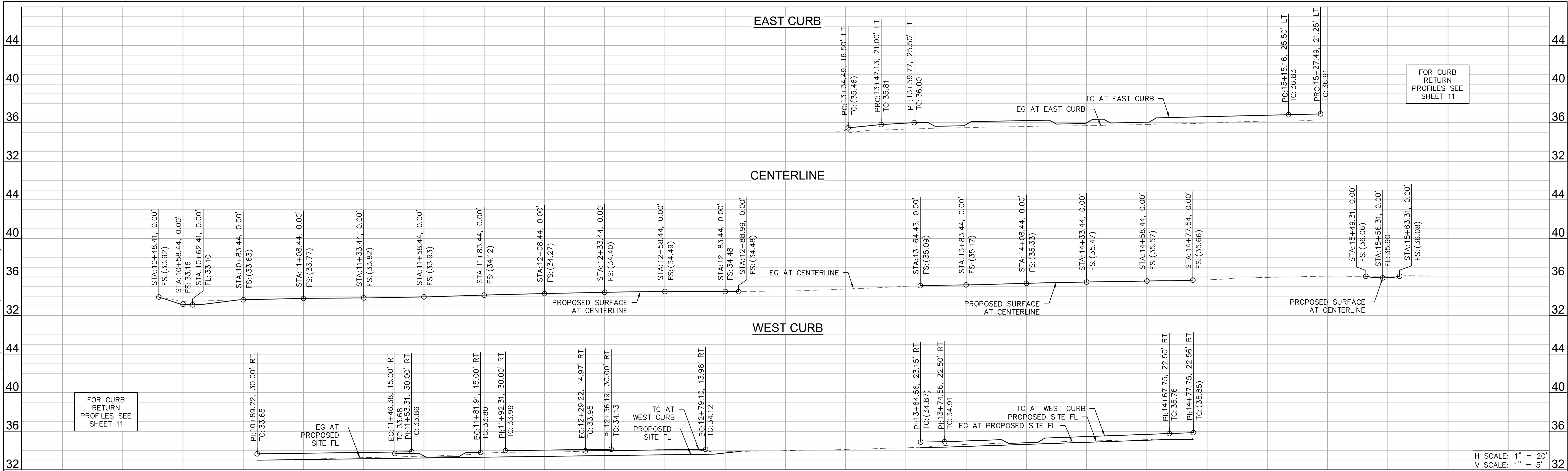


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BID SET PLANS - NOT FOR CONSTRUCTION

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CURB DATA					
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS	
C1	Δ=90° 00' 00"	20.0'	31.42'	6" CURB PER SDRSD G-01	
C2	Δ=90° 00' 00"	20.0'	31.42'	6" TO 8" CURB TRANSITION	
C3	Δ=60° 00' 00"	3.5'	3.67'	6" CURB PER SDRSD G-01	
C4	Δ=120° 00' 00"	1.0'	2.09'	6" CURB PER SDRSD G-01	
C5	Δ=60° 00' 00"	3.0'	3.14'	6" CURB PER SDRSD G-01	
C6	Δ=118° 52' 14"	1.0'	2.07'	BMP C&G EDGE TREATMENT PER DETAIL M ON SHEET 5	
C7	Δ=61° 07' 46"	3.0'	3.20'	BMP C&G EDGE TREATMENT PER DETAIL M ON SHEET 5	
C8	Δ=39° 11' 42"	20.0'	13.68'	6" CURB PER SDRSD G-01	
C9	Δ=39° 11' 42"	20.0'	13.68'	6" CURB PER SDRSD G-01	
C10	Δ=38° 02' 51"	20.0'	13.28'	6" CURB PER SDRSD G-01	

CURB DATA					
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS	
C11	Δ=128° 02' 51"	20.0'	44.70'	6" CURB PER SDRSD G-01	
L1	S 89°20'22" E		21.25'	8" C&G PER SDRSD G-02	
L2	S 60°39'38" W		13.57'	6" CURB PER SDRSD G-01	
L3	S 0°39'38" W		64.09'	6" CURB PER SDRSD G-01	
L4	N 60°39'38" E		15.59'	6" CURB PER SDRSD G-01	
L5	S 0°39'38" W		35.54'	6" C&G PER SDRSD G-02	
L6	S 60°39'38" W		15.59'	6" CURB PER SDRSD G-01	
L7	S 0°39'38" W		43.88'	6" CURB PER SDRSD G-01	
L8	N 60°39'38" E		6.93'	6" CURB PER SDRSD G-01	
L9	N 60°39'38" E		8.70'	BMP SIDE EDGE TREATMENT PER DETAIL L ON SHEET 5	

CURB DATA					
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS	
L10	S 0°28'08" E		49.89'	BMP C&G EDGE TREATMENT PER DETAIL M ON SHEET 5	
L11	S 60°39'38" W		9.83'	BMP SIDE EDGE TREATMENT PER DETAIL L ON SHEET 5	
L12	S 60°39'38" W		7.07'	6" CURB PER SDRSD G-01	
L13	S 0°39'38" W		53.95'	BMP SIDE EDGE TREATMENT PER DETAIL L ON SHEET 5	
L14	S 0°39'38" W		155.39'	6" CURB PER SDRSD G-01	
L15	S 89°20'22" E		26.00'	6" C&G PER SDRSD G-02	
L16	S 3°02'18" E		3.43'	6" CURB PER SDRSD G-01	
L17	S 3°02'18" E		4.15'	6" CURB PER SDRSD G-01	
L18	S 0°39'38" W		93.19'	6" CURB PER SDRSD G-01	
L19	S 0°58'45" W		10.00'	6" CURB PER SDRSD G-01	

CURB DATA					
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS	
L20	S 0°39'38" W		15.35'	VARIABLE HEIGHT CURB AND GUTTER PER DETAIL B ON SHEET 3	
L21	S 0°39'38" W		12.00'	TRENCH DRAIN WITH 18" GRATE PER DETAIL C ON SHEET 3	
L22	S 0°39'38" W		64.57'	VARIABLE HEIGHT CURB AND GUTTER PER DETAIL B ON SHEET 3	

ENGINEER OF WORK:

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Nicholas J. Oleskiewicz
NICHOLAS J. OLESKOWICZ R.C.E. 89464

10-11-2023
DATE

REGISTERED PROFESSIONAL ENGINEER
No. 89464
CIVIL
STATE OF CALIFORNIA

10TH STREETSCAPE IMPROVEMENTS PROJECT
PLAN AND PROFILE

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 8 OF 22 SHEETS

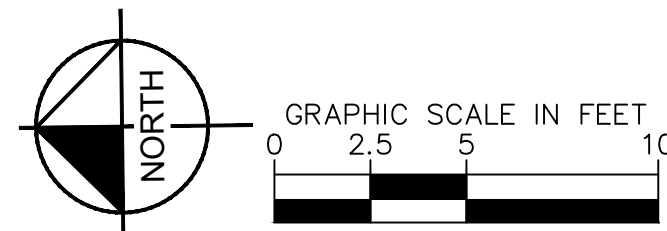
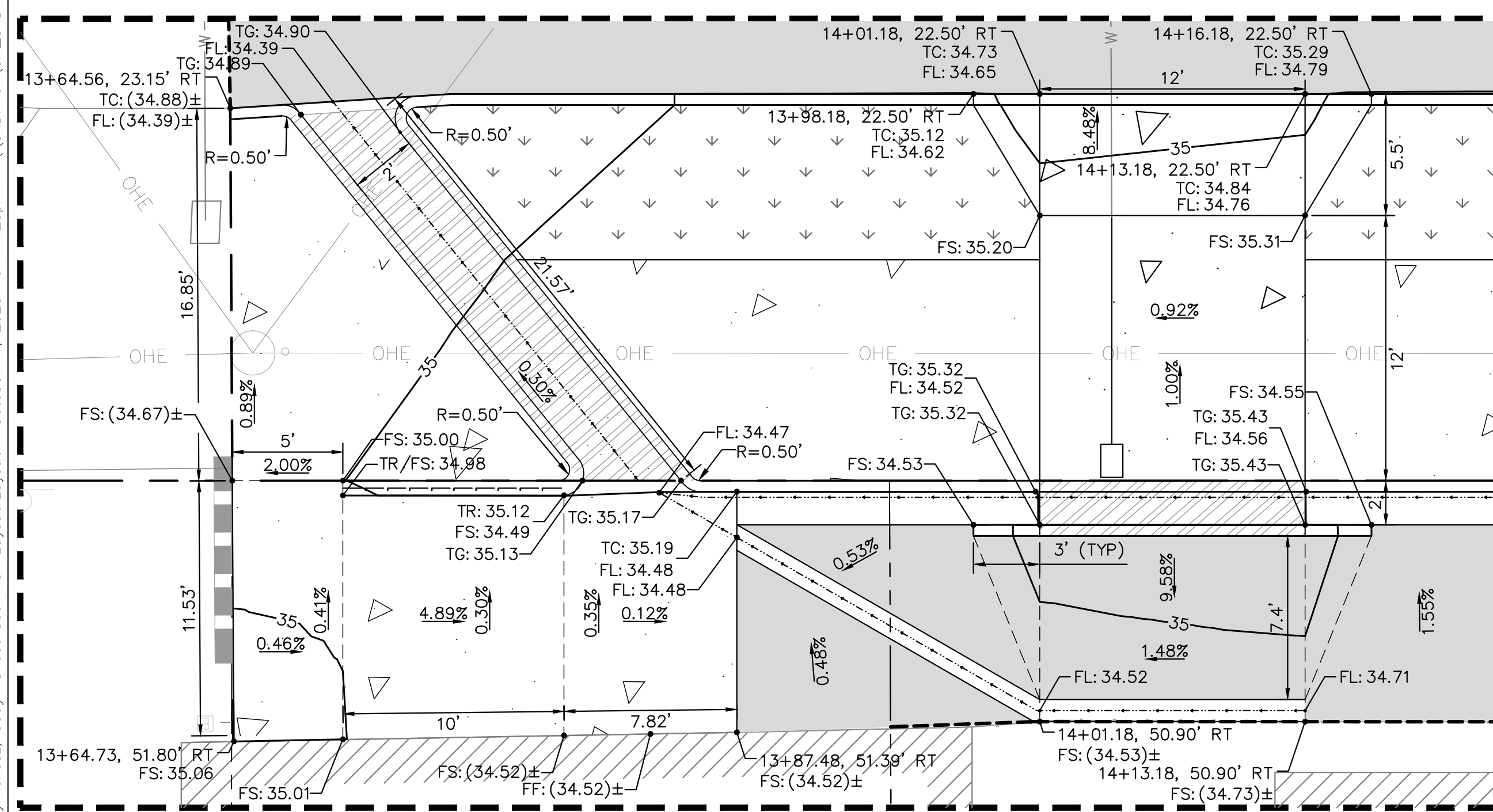
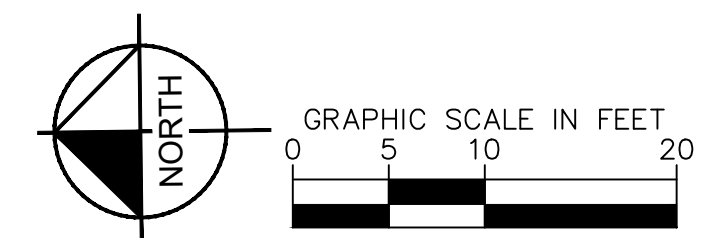
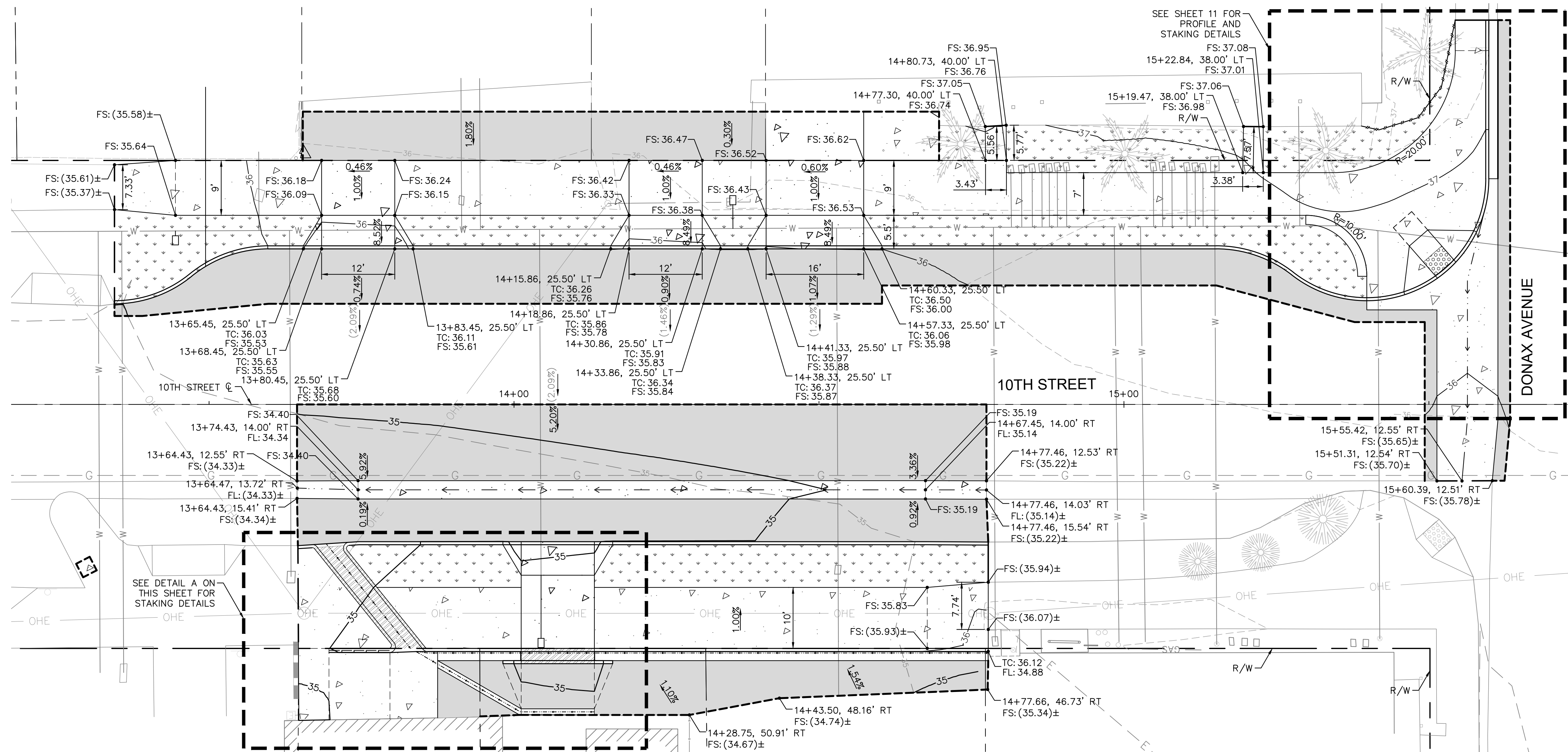
W.O. CIP S22-107

FOR CITY ENGINEER		DATE		DIVISION HEAD	
DESCRIPTION	BY	APPROVED	DATE	FILMED	
ORIGINAL	KH				DESIGN ENGINEER
					NAD 83 COORDINATES
					LAMBERT COORDINATES

CONTRACTOR INSPECTOR _____ DATE STARTED _____ DATE COMPLETED _____

S22-107- 8 -D

BID SET PLANS - NOT FOR CONSTRUCTION



10TH STREETSCAPE IMPROVEMENTS PROJECT
STAKING DETAILS

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 9 OF 22 SHEETS

W.O. CIP S22-107

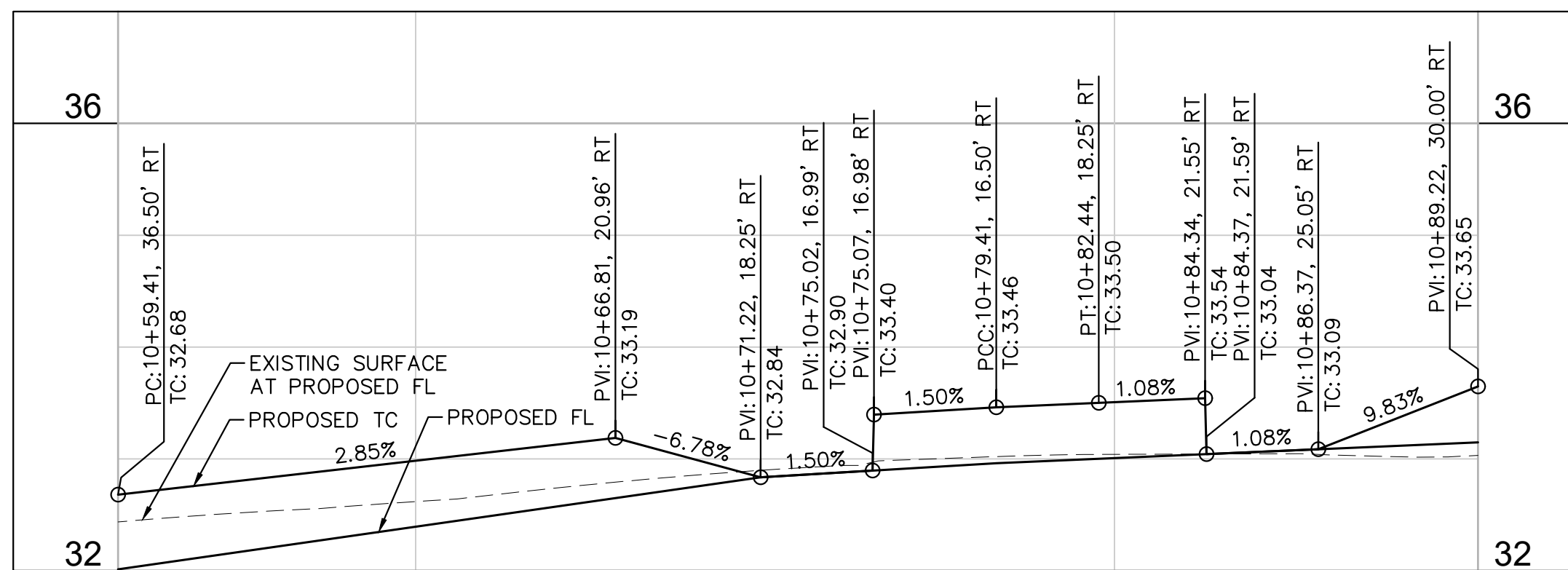
FOR CITY ENGINEER _____		DATE _____		DIVISION HEAD _____	
DESCRIPTION	BY	APPROVED	DATE	FILMED	
ORIGINAL	KH				DESIGN ENGINEER
					NAD 83 COORDINATES
					LAMBERT COORDINATES
CONTRACTOR _____		DATE STARTED _____		S22-107- 9 - D	
INSPECTOR _____		DATE COMPLETED _____			

ENGINEER OF WORK:

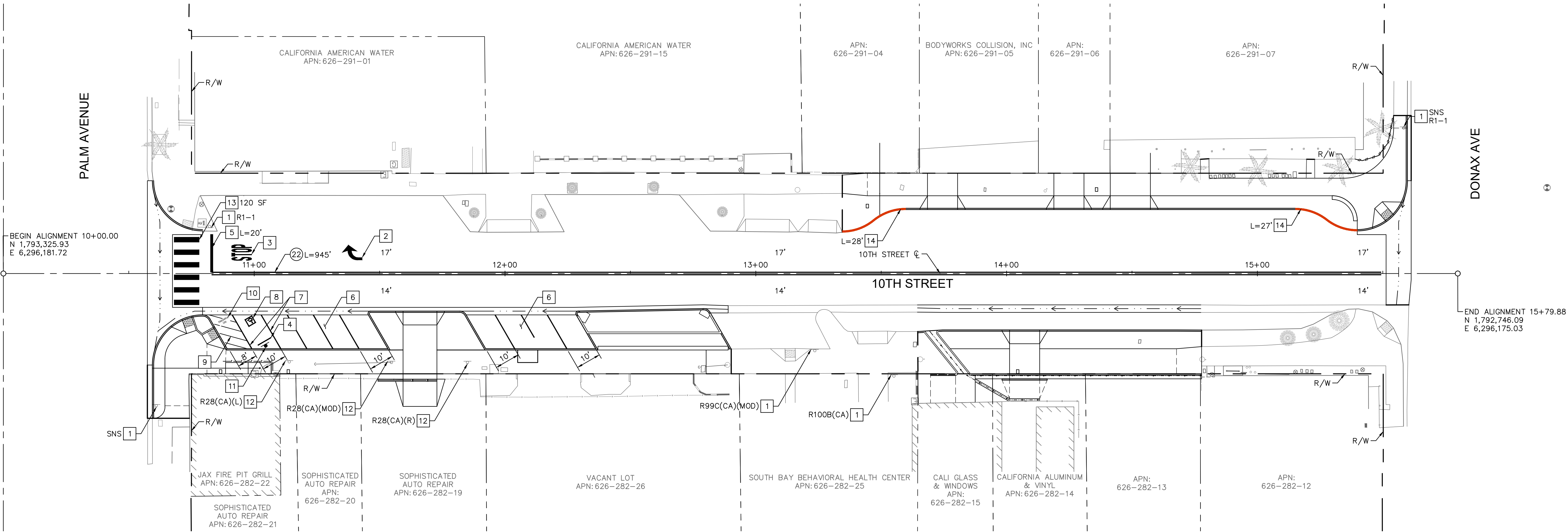
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10-11-2023
DATE



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LEGEND

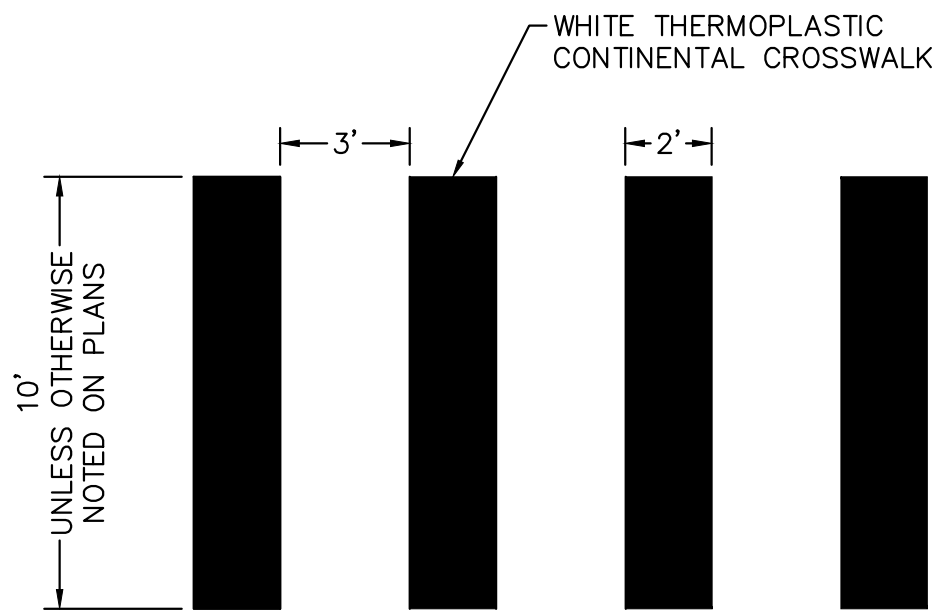
- PROPOSED SIGN
- XX' NEW LANE WIDTH OR LENGTH OF NEW STRIPING
- STRIPING DETAIL PER LATEST CALTRANS STANDARD PLANS
- TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
- "STOP" PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24D
- DISABLED PARKING PAVEMENT SYMBOL PER SDRSD M-29

SIGNING AND MARKING NOTES

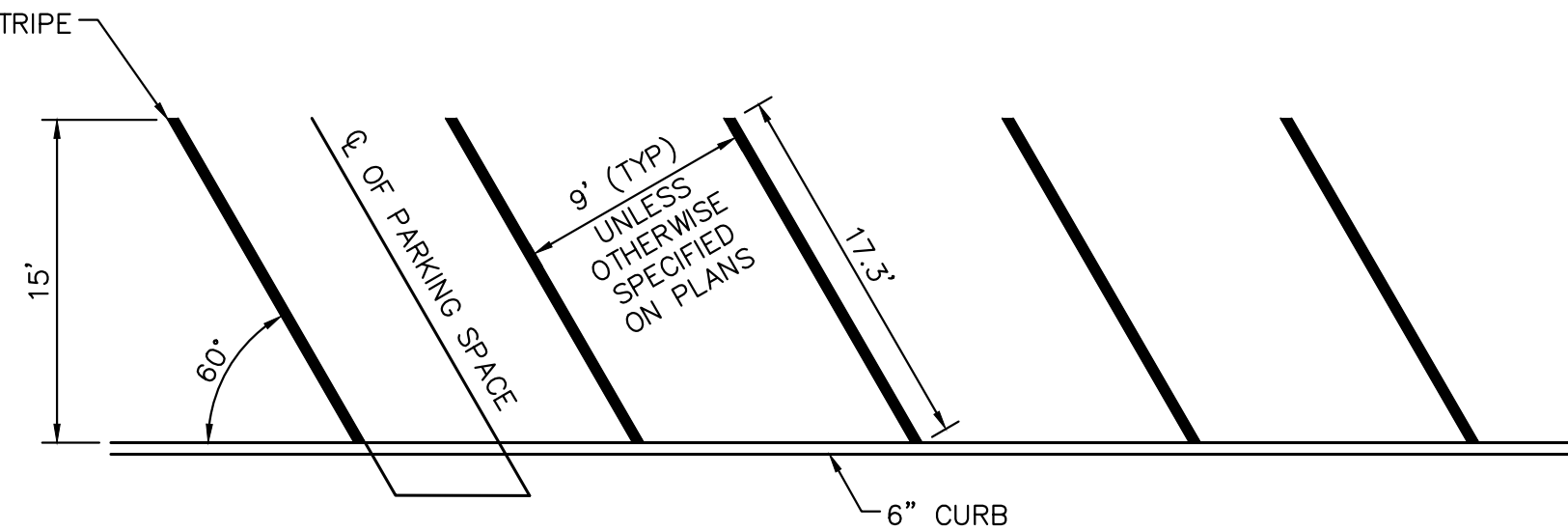
- PROTECT IN PLACE
- FURNISH AND INSTALL TYPE IV ARROW MARKING PER CALTRANS STANDARD PLAN A24A
- FURNISH AND INSTALL "STOP" PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24D
- INSTALL 6' PRE-CAST CONCRETE WHEEL STOP
- INSTALL 12" LIMIT LINE PER CALTRANS STANDARD PLAN A24E. LIMIT LINE SHALL BE A MINIMUM 4' AWAY FROM CROSSWALK MARKING
- FURNISH AND INSTALL ANGLED PARKING PER DETAIL ON THIS SHEET
- FURNISH AND INSTALL 4" BLUE STRIPE AT PERIMETER OF ADA ACCESS AISLES OR ADA PARKING STALL
- FURNISH AND INSTALL DISABLED PARKING PAVEMENT SYMBOL PER SDRSD M-29
- FURNISH AND INSTALL WHITE STRIPES AT 36" MAX ON CENTER AT 45-DEGREE ANGLE
- WITHIN LOADING AND UNLOADING ACCESS AISLE, PAINT THE WORDS "NO PARKING" IN WHITE, 12" HIGH LETTERS MINIMUM. NO STRIPING THROUGH TEXT
- FURNISH AND INSTALL VAN-ACCESSIBLE PARKING SIGN PER SDRSD M-28A AND M-28B
- SIGN TO BE REMOVED AND RELINQUISHED TO CITY
- INSTALL WHITE CONTINENTAL CROSSWALK PER DETAIL ON THIS SHEET
- PAINT CURB RED

STRIPING DETAILS

- INSTALL TWO-DIRECTIONAL NO PASSING PATTERN (DETAIL 22) PER CALTRANS STANDARD PLAN A20A



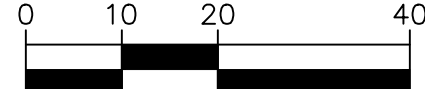
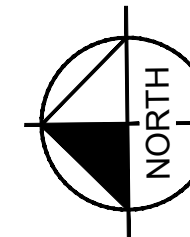
CONTINENTAL CROSSWALK DETAIL
NOT TO SCALE



ANGLE PARKING MARKING INSTALLATION DETAIL
NOT TO SCALE

GENERAL NOTES

- THE CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS AND LEGENDS BY HYDROBLASTING. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
- ALL PAVEMENT MARKINGS AND STRIPING SHALL BE THERMOPLASTIC.



ENGINEER OF WORK:

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NICHOLAS J. OLESKOWICZ R.C.E. 89464



10-11-2023
DATE





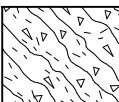
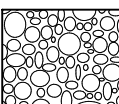
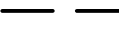

10TH STREETSCAPE IMPROVEMENTS PROJECT
SIGNING AND MARKING PLAN

CITY OF IMPERIAL BEACH, CALIFORNIA ENGINEERING DEPARTMENT SHEET 12 OF 22 SHEETS					W.O. NO. CIP S22-107
FOR CITY ENGINEER		DATE		DIVISION HEAD	
DESCRIPTION	BY	APPROVED	DATE	FILMED	DESIGN ENGINEER
ORIGINAL	KH				
					NAD 83 COORDINATES
					LAMBERT COORDINATES
CONTRACTOR INSPECTOR		DATE STARTED		DATE COMPLETED	
				S22-107- 12-D	

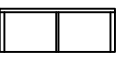


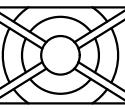
BID SET PLANS - NOT FOR CONSTRUCTION

Plotted By:Rokosz, Cody Sheet Set:Kha Layout:LANDSCAPE NOTES October 11, 2023 04:12:09pm \\SNDPFP01\CA_SND1\SND_MUNI\195243012 - 10th Streetscape Improvements\Design\Plan Sheets\243012-LS.dwg

PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	CONT	HEIGHT/SPREAD	CAL.	WUCOLS
	7	CERCIS CANADENSIS 'FOREST PANSY' / FOREST PANSY EASTERN REDBUD	36" BOX	10-12' HT. X 5-6' SPR.	2.5" CAL.	MODERATE
	5	EXISTING TREE / TO REMAIN PROTECT IN PLACE	-	-	-	-
	6	METROSIDEROS EXCELSA / NEW ZEALAND CHRISTMAS TREE	36" BOX	10-12' HT. X 5-6' SPR.	3" CAL.	MODERATE
SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS	
	230	LOMANDRA LONGIFOLIA 'BREEZE' / BREEZE MAT RUSH	5 GAL.	3' O.C.	LOW	
	74	MUHLENBERGIA DUBIA / PINE MUHLY	5 GAL.	3' O.C.	LOW	
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS	
	95	SENECIO SERPENS / BLUE CHALKSTICKS	1 GAL.	2' O.C.	LOW	
INERTS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS	
	481 SF	CRUSHED ROCK / 3" DEPTH MIN. BAJA CRESTA RUBBLE BY SOUTHWEST BOULDER AND STONE OR APPROVED EQUAL. SIZE TO BE 1" - 3"	-	-	-	
	430 LF	ROOT CONTROL BARRIER				
	2,512 SF	WOOD BARK MULCH (3" DEPTH)				

LEGEND

SYMBOL	DESCRIPTION	QTY
	BENCH (SEE SPECIFICATIONS)	6
	TRASH RECEPTACLE (SEE SPECIFICATIONS)	2
	SEAT WALL SEE DETAIL	70 LF
	TREE GRATE SEE SPECIFICATIONS	1

GENERAL LANDSCAPE NOTES

- THE WORK SHALL BE DONE IN ACCORDANCE WITH THE PLANS AND THE MOST CURRENT EDITION OF THE APPLICABLE CITY AND/OR REGIONAL STANDARDS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF THESE STANDARDS, SPECIFICATIONS AND DRAWINGS, AS WELL AS ALL OTHER STANDARDS AND SPECIFICATIONS WHICH MAY BE NECESSARY TO COMPLETE AND ACCURATELY INTERPRET THESE PLANS.
- ALL QUANTITIES LISTED IN THE LANDSCAPE SCHEDULE ARE FOR THE CONVENIENCE OF THE CONTRACTOR. IN THE CASE OF ANY DISCREPANCIES, PLANS SHALL OVERRIDE THE LANDSCAPE AND BID SCHEDULE QUANTITIES. CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON THE PLANS AND BASE THEIR BID ACCORDINGLY.
- RESPONSIBILITY FOR ESTABLISHING SUBGRADES IS NOT INCLUDED IN THIS WORK. INSPECT SUBGRADES PRIOR TO COMMENCING WORK TO CONFIRM SUBGRADE DEPTHS AND GRADES. ADVISE LANDSCAPE ARCHITECT OF DISCREPANCIES WITH DRAWINGS OR SPECIFICATIONS. ALL PLANTING AREAS SHALL BE LEFT FREE OF CONSTRUCTION DEBRIS AND/OR TOXIC MATERIAL AND GRADED TO A LEVEL TO PERMIT LANDSCAPE CONSTRUCTION. TRENCHES OR OTHER FILLED EXCAVATIONS SHALL BE COMPACTED PRIOR TO LANDSCAPE INSTALLATION.
- SITE GRADING NECESSITATED BY THE WORK AS IT PROGRESSES AND NOT SPECIFICALLY CALLED OUT ON THE PLANS WILL BE CONSIDERED INCIDENTAL WORK.
- ALL LANDSCAPE AREAS SHALL BE UNIFORMLY GRADED SO THAT FINISHED SURFACES CONFORM TO THE TYPICAL SECTIONS AND PROPOSED GRADES SHOWN. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, AND FREE FROM IRREGULAR SURFACE DRAINAGE. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING THE FINISH GRADE AND SHALL BEAR FINAL RESPONSIBILITY FOR PROPER SURFACE DRAINAGE OF PLANTED AREAS.
- AFTER ROUGH GRADING HAS OCCURRED, CONTRACTOR SHALL OBTAIN AN AGRONOMIC SOILS REPORT AND SUBMIT TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO AMENDMENTS AND/OR PLANTING. CONTRACTOR SHALL APPLY RECOMMENDATIONS UNLESS OTHERWISE NOTED BY LANDSCAPE ARCHITECT.
- BACKFILL MIX SHALL BE PLACED IN 6" LIFTS AND TAMPED INTO PLACE AROUND THE PLANT. NO TRANSPLANTING SHALL BE DONE WHEN SOIL IS EXCESSIVELY WET. DO NOT COUNTERSINK AROUND CACTI OR SUCCULENTS. PROVIDE POSITIVE DRAINAGE AWAY FROM PLANT.
- ALL TREES SHALL BE PLANTED A MINIMUM OF 5 FEET, ALL SHRUBS AND ACCENTS A MINIMUM OF 24", AND ALL GROUNDCOVERS 18" FROM EDGE OF CURBS, WALKS, WALLS, PADS, ETC., UNLESS DIRECTED OTHERWISE BY THE LANDSCAPE ARCHITECT.
- EXCAVATE PITS, AS SHOWN ON DRAWINGS AND DETAILS. LOOSEN HARD SUBSOIL IN BOTTOM OF PIT. TEST DRAINAGE OF TREE, SHRUB AND PLANT PITS BY FILLING WITH WATER TWICE IN SUCCESSION. THE RETENTION OF WATER IN PLANTING PITS FOR MORE THAN TWENTY-FOUR (24) HOURS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. SUBMIT IN WRITING A PROPOSAL FOR THE CORRECTION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH WORK.
- IF ROCK, UNDERGROUND CONSTRUCTION, ADVERSE DRAINAGE CONDITIONS, OR OTHER OBSTRUCTIONS ARE ENCOUNTERED IN EXCAVATION FOR PLANTING OF ANY PLANT MATERIAL, NOTIFY THE OWNER'S REPRESENTATIVE. NEW LOCATIONS MAY BE SELECTED BY THE OWNER'S REPRESENTATIVE, OR INSTRUCTIONS MAY BE ISSUED TO DIRECT REMOVAL OF OBSTRUCTION. PROCEED WITH WORK ONLY AFTER APPROVAL OF THE OWNER'S REPRESENTATIVE.
- DO NOT MAKE SUBSTITUTIONS. IF SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY FROM AT LEAST FIVE SOURCES TO THE OWNER'S REPRESENTATIVE, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL FOR FINAL APPROVAL.
- ALL PLANT MATERIAL AND SPECIFICATIONS TO CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK STANDARDS UNLESS OTHERWISE NOTED.
- LAY OUT INDIVIDUAL TREE AND PLANT LOCATIONS AND AREAS FOR MULTIPLE PLANTINGS, STAKE LOCATIONS AND OUTLINE AREAS AND SECURE THE OWNER'S REPRESENTATIVE'S ACCEPTANCE BEFORE START OF PLANTING WORK. MAKE MINOR ADJUSTMENTS AS DIRECTED.
- ALL SHRUBS SHALL HAVE A FULL HEAD THAT COVERS THE CAN DIAMETER (CAN FULL) AND A MINIMUM OF THREE STEMS/BRANCHES.
- FINISH GRADE FOR PLANTED AREAS SHALL BE 1" BELOW ALL CURBS, WALKS AND PAVING WITH SMOOTH EVEN LINES AT EDGES OF STRUCTURES.
- FINISH LANDSCAPE GRADES SHALL SLOPE AT A 2% GRADE AWAY FROM CURBS, WALKS, AND WALLS.
- ALL LANDSCAPE AREAS SHALL RECEIVE A 3" DEPTH OF WOOD BARK MULCH, UNLESS OTHERWISE NOTED ON THESE PLANS. TREES TO HAVE A 6" DIAMETER RING AROUND TRUNK FREE OF MULCH. MULCH SHALL EXTEND UNDER ALL SHRUBS AND PLANTS. APPLY PRE-EMERGENT HERBICIDE PRIOR TO AND AFTER MULCH INSTALLATION.
- PROVIDE SAMPLES OF PROPOSED MULCH SHOWING COLOR, GRADATION SIZE RANGE AND TEXTURE INCLUDING PROPOSED SOURCE. PROVIDE 1/2 CUBIC FOOT SAMPLE OF EACH.
- ANY ROCK MULCH OR DECOMPOSED GRANITE SHALL NOT CONTAIN LUMPS OR BALLS OF CLAY, CALICHE, ORGANIC MATTER OR CALCAREOUS COATING. PROVIDE WEED BARRIER UNDER ALL DG AND/OR ROCK MULCH. THE CONTRACTOR SHALL ENSURE THAT SUFFICIENT QUANTITY IS AVAILABLE FROM A SINGLE SOURCE TO COMPLETE THE PROJECT. THE OWNER'S REPRESENTATIVE SHALL APPROVE SAMPLES PRIOR TO ORDERING.
- NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, PAVEMENT AND SIDEWALKS HAVE BEEN SWEEPED CLEAN OF ALL DIRT AND DEBRIS ACCORDING TO PLANS.
- IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PERMITS REQUIRED. (SEE THE CITY GENERAL CONDITIONS)
- ALL CONSTRUCTION ROADS AND COMPACTED AREAS DEVELOPED THROUGH CONSTRUCTION THAT ARE WITHIN THE LANDSCAPE AREAS SHALL BE SCARIFIED AND LOOSENED TO A DEPTH OF 12" PRIOR TO LANDSCAPE AND IRRIGATION WORK BEGINNING

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AB-1881 AND APPLIED THEM FOR EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN.


RANDALL A. KOPFF JR., LLA 6633

LANDSCAPE ARCHITECT NOTES

- THE TERM "LANDSCAPE ARCHITECT" USED HEREIN SHALL MEAN THE LANDSCAPE ARCHITECT WHO HAS SIGNED AND SEALED THESE PLANS AND IS IN RESPONSIBLE CHARGE OF THE LANDSCAPE ARCHITECTURE DESIGN. THE TERM "CONTRACTOR" USED HEREIN SHALL MEAN ANY GENERAL CONTRACTOR OR SUBCONTRACTOR USING THESE PLANS. ANY AGENCY SIGNATURE OR APPROVAL ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF ANY OF THESE NOTES.
- THE LANDSCAPE ARCHITECT WILL NOT PROVIDE, OBSERVE, COMMENT ON NOR ENFORCE ANY SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY MEASURES AND SHALL BE SOLELY RESPONSIBLE FOR SAME AND COMPLYING WITH ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS. THE CONTRACTOR AGREES THAT SHE/HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS AND SAFETY OF ALL PERSONS AND PROPERTY DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- THE LANDSCAPE ARCHITECT SHALL HAVE NO RESPONSIBILITY FOR ANY OF THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION, TECHNIQUES, EQUIPMENT CHOICE AND USAGE, SEQUENCE, SCHEDULE, SAFETY PROGRAMS, OR SAFETY PRACTICES, NOR SHALL THE LANDSCAPE ARCHITECT HAVE ANY AUTHORITY OR RESPONSIBILITY TO STOP OR DIRECT THE WORK OF ANY CONTRACTOR.
- THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE LANDSCAPE ARCHITECT AND OWNER, THEIR AGENTS AND EMPLOYEES, HARMLESS FROM ANY AND ALL CLAIMS, DEMANDS, JUDGMENTS, LOSS, DAMAGES, COSTS, EXPENSES, FEES OR LIABILITY WHATSOEVER, REAL OR ALLEGED, IN CONNECTION WITH, IN WHOLE OR IN PART, DIRECTLY OR INDIRECTLY, THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE LANDSCAPE ARCHITECT.
- IF THERE ARE ANY QUESTIONS REGARDING THESE PLANS, THE CONTRACTOR SHALL REQUEST IN WRITING FROM THE LANDSCAPE ARCHITECT AND THE OWNER, AN INTERPRETATION BEFORE DOING ANY RELATED OR IMPACTED WORK.
- THE CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO PROTECT THE PROPERTY FROM ANY EROSION AND SILTATION THAT RESULT FROM CONTRACTOR OPERATIONS BY APPROPRIATE MEANS UNTIL SUCH TIME THAT THE PROJECT IS COMPLETED AND ACCEPTED FOR MAINTENANCE BY WHOMEVER IS TO BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO STARTING WORK NEAR THEIR FACILITIES AND SHALL COORDINATE WORK WITH UTILITY COMPANY REPRESENTATIVES.
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM A SEARCH OF READILY AVAILABLE RECORDS. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ALL DAMAGES THERETO CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE APPROPRIATE SPECIFICATIONS AND STANDARDS AT THE SOLE EXPENSE OF THE CONTRACTOR.
- THE LOCATION, ELEVATIONS, SIZE, TYPE AND CONDITION OF EXISTING IMPROVEMENTS ADJACENT TO THE PROPOSED WORK INDICATED ON THESE PLANS SHALL BE CONFIRMED BY THE CONTRACTOR BY FIELD MEASUREMENTS AND OBSERVATIONS PRIOR TO CONSTRUCTION OF NEW WORK. THE CONTRACTOR WILL IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT IN WRITING IF ANY DISCREPANCIES OR CONFLICTING INFORMATION IS FOUND.
- THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES AS NEEDED, SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY DUE TO THE ACTUAL LOCATION, SIZE, TYPE, OR CONDITION OF EXISTING FACILITIES DIFFERING FROM WHAT IS SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ANY DAMAGE TO THE EXISTING IMPROVEMENTS AND REPLACEMENT TO THE SATISFACTION OF THE OWNER.
- SHOULD CONFLICTING INFORMATION BE FOUND ON THE PLANS THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING IMMEDIATELY BEFORE PROCEEDING WITH THE WORK IN QUESTION.
- ANYTHING MENTIONED IN THE SPECIFICATIONS, IF ANY, AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH.

ENGINEER OF WORK:

Kimley»Horn Kimley-Horn
and Associates, Inc. ©2023
401 B Street, Suite 600, San Diego, California 92101
Phone: 619.234.9411 / www.kimley-horn.com


RANDALL KOPFF P.L.A. 6633



10-11-2023
DATE

10TH STREETSCAPE IMPROVEMENTS PROJECT
LANDSCAPE NOTES

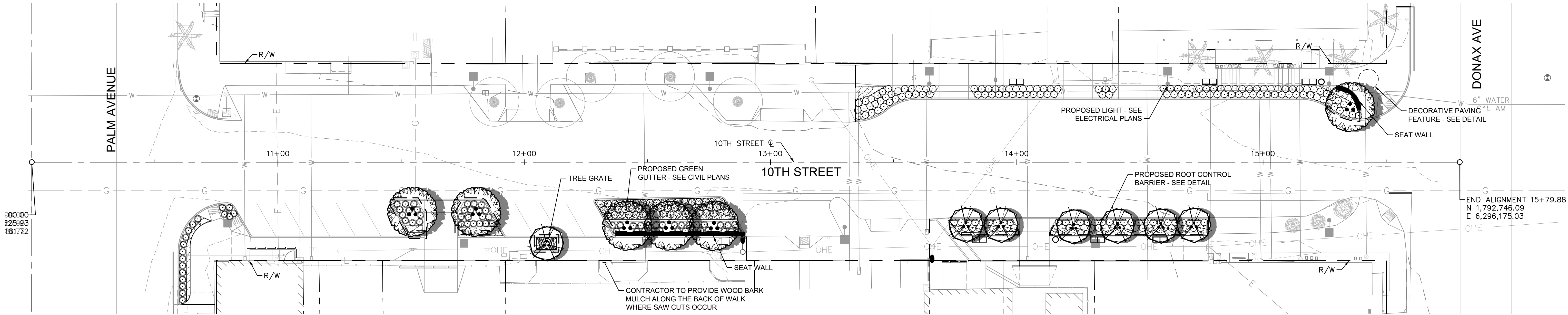
CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 13 OF 22 SHEETS

W.O. NO. CIP S22-107





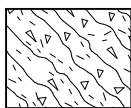
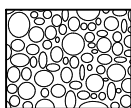
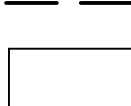
FOR CITY ENGINEER		DATE			DIVISION HEAD
DESCRIPTION	BY	APPROVED	DATE	FILMED	
ORIGINAL	KH				DESIGN ENGINEER
					NAD 83 COORDINATES
					LAMBERT COORDINATES
CONTRACTOR		DATE STARTED		S22-107- 13-D	
INSPECTOR		DATE COMPLETED			

BID SET PLANS - NOT FOR CONSTRUCTION

Plotted By:Rokosz, Cody Sheet Set:Kha Layout:LANDSCAPE PLAN October 11, 2023 04:12:14pm \\SND\PF01\CA_SND\1\SND_MUNI\195243012 - 10th Streetscape Improvements\Design\Plan Sheets\243012-LS.dwg



PLANT SCHEDULE





TREES	QTY	BOTANICAL / COMMON NAME	CONT	HEIGHT/SPREAD	CAL.	WUCOLS
	7	CERCIS CANADENSIS 'FOREST PANSY' / FOREST PANSY EASTERN REDBUD	36" BOX	10-12' HT. X 5-6' SPR.	2.5" CAL.	MODERATE
	5	EXISTING TREE / TO REMAIN PROTECT IN PLACE	-	-	-	-
	6	METROSIDEROS EXCELSA / NEW ZEALAND CHRISTMAS TREE	36" BOX	10-12' HT. X 5-6' SPR.	3" CAL.	MODERATE
SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS	
	230	LOMANDRA LONGIFOLIA 'BREEZE' / BREEZE MAT RUSH	5 GAL.	3' O.C.	LOW	
	74	MUHLENBERGIA DUBIA / PINE MUHLY	5 GAL.	3' O.C.	LOW	
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS	
	95	SENECIO SERPENS / BLUE CHALKSTICKS	1 GAL.	2' O.C.	LOW	
INERTS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS	
	481 SF	CRUSHED ROCK / 3" DEPTH MIN. BAJA CRESTA RUBBLE BY SOUTHWEST BOULDER AND STONE OR APPROVED EQUAL. SIZE TO BE 1" - 3"	-	-		
	430 LF	ROOT CONTROL BARRIER				
	2,512 SF	WOOD BARK MULCH (3" DEPTH)				

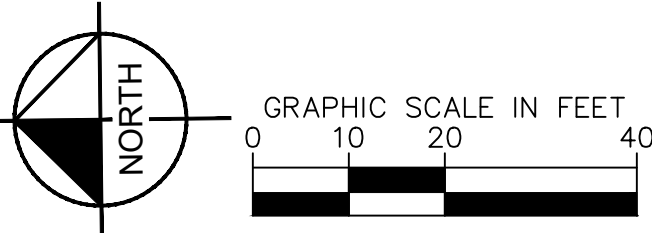
ENGINEER OF W

Kimley»Ho

401 B Street, Suite 600,
Phone: 619.234.9411 /

LEGEND

SYMBOL	DESCRIPTION	QTY
	BENCH (SEE SPECIFICATIONS)	6
	TRASH RECEPTACLE (SEE SPECIFICATIONS)	2
	SEAT WALL SEE DETAIL	70 LF
	TREE GRATE SEE SPECIFICATIONS	1



ENGINEER OF WORK:

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RANDALL KOPFF P.L.A. 6633



10-11-2023
DATE

10TH STREETSCAPE IMPROVEMENTS PROJECT
LANDSCAPE PLAN

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 14 OF 22 SHEETS

W.O. NO. CIP S22-107

FOR CITY ENGINEER	DATE	DIVISION HEAD
DESCRIPTION	BY	APPROVED
ORIGINAL	KH	

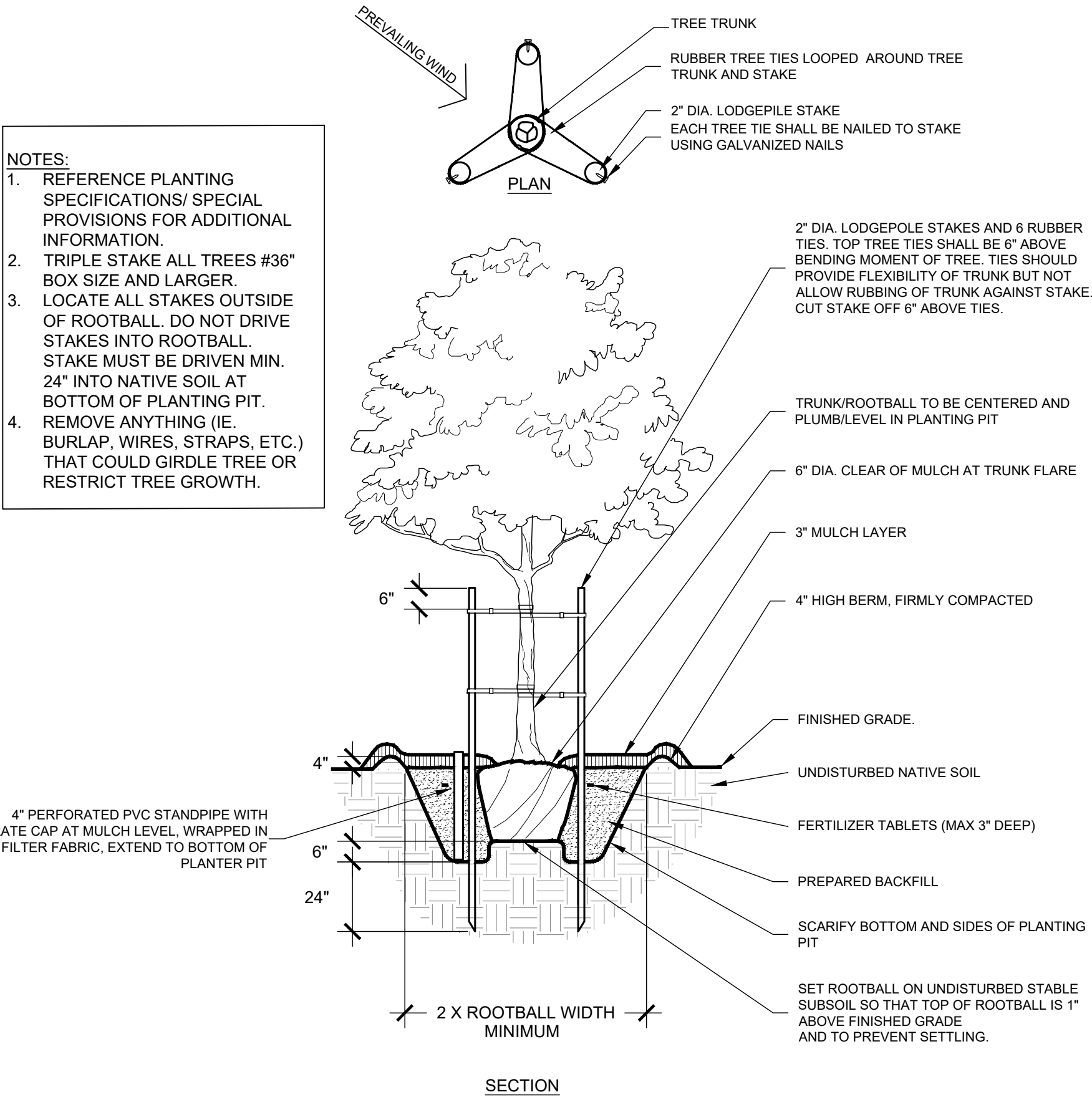
					NAD 83 COORDINATES
					LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

S22-107- 14-D

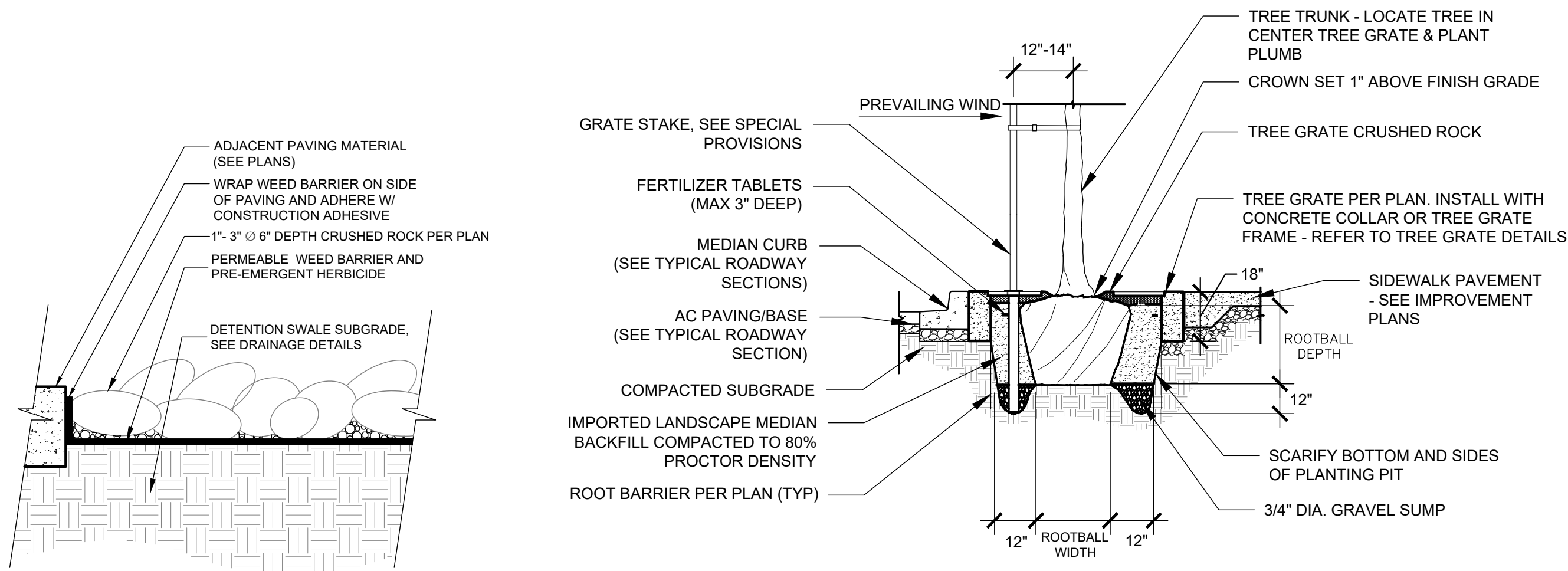
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A 36" AND LARGER BOX TREE PLANTING

NTS

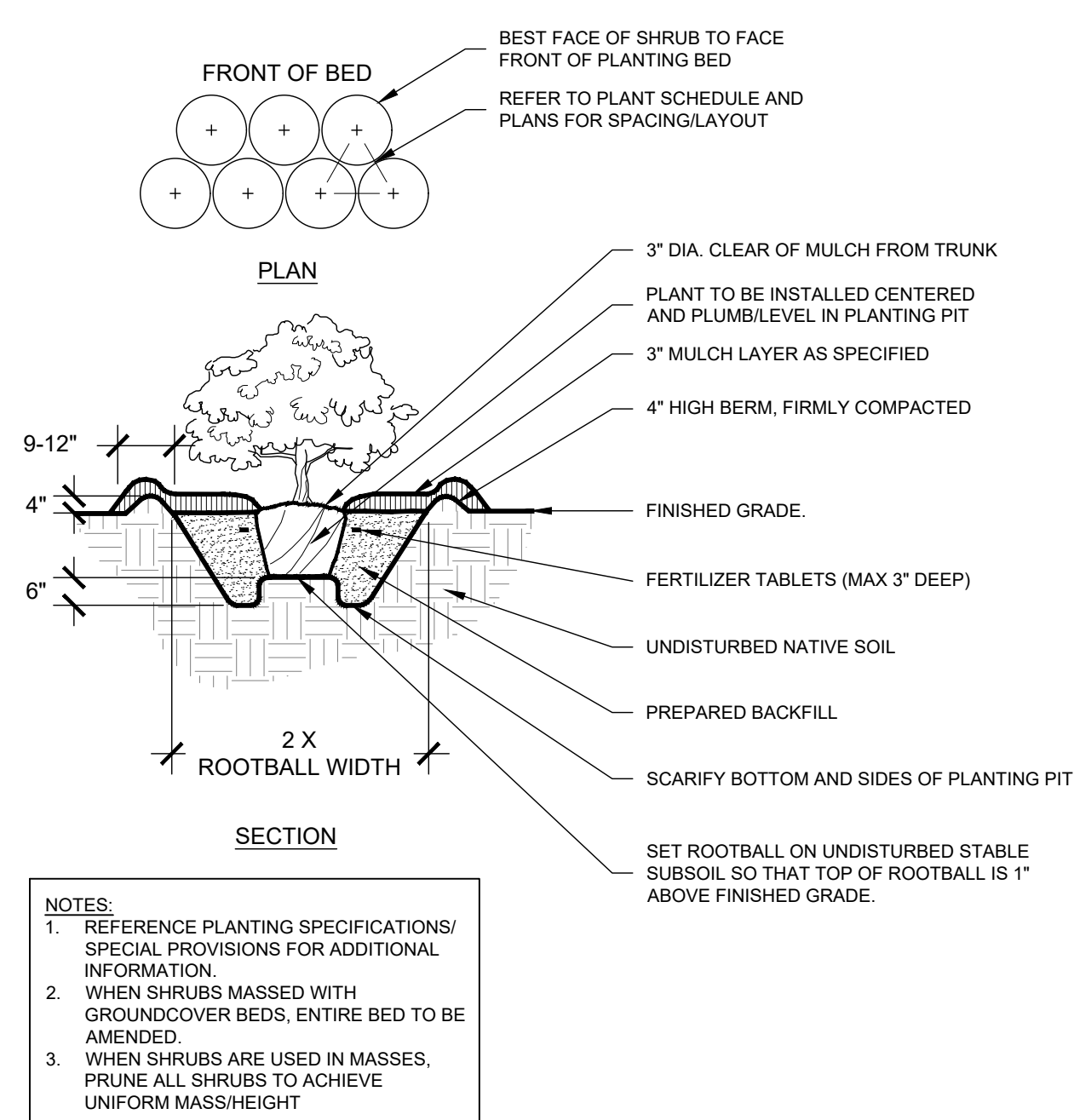


D CRUSHED ROCK

NTS

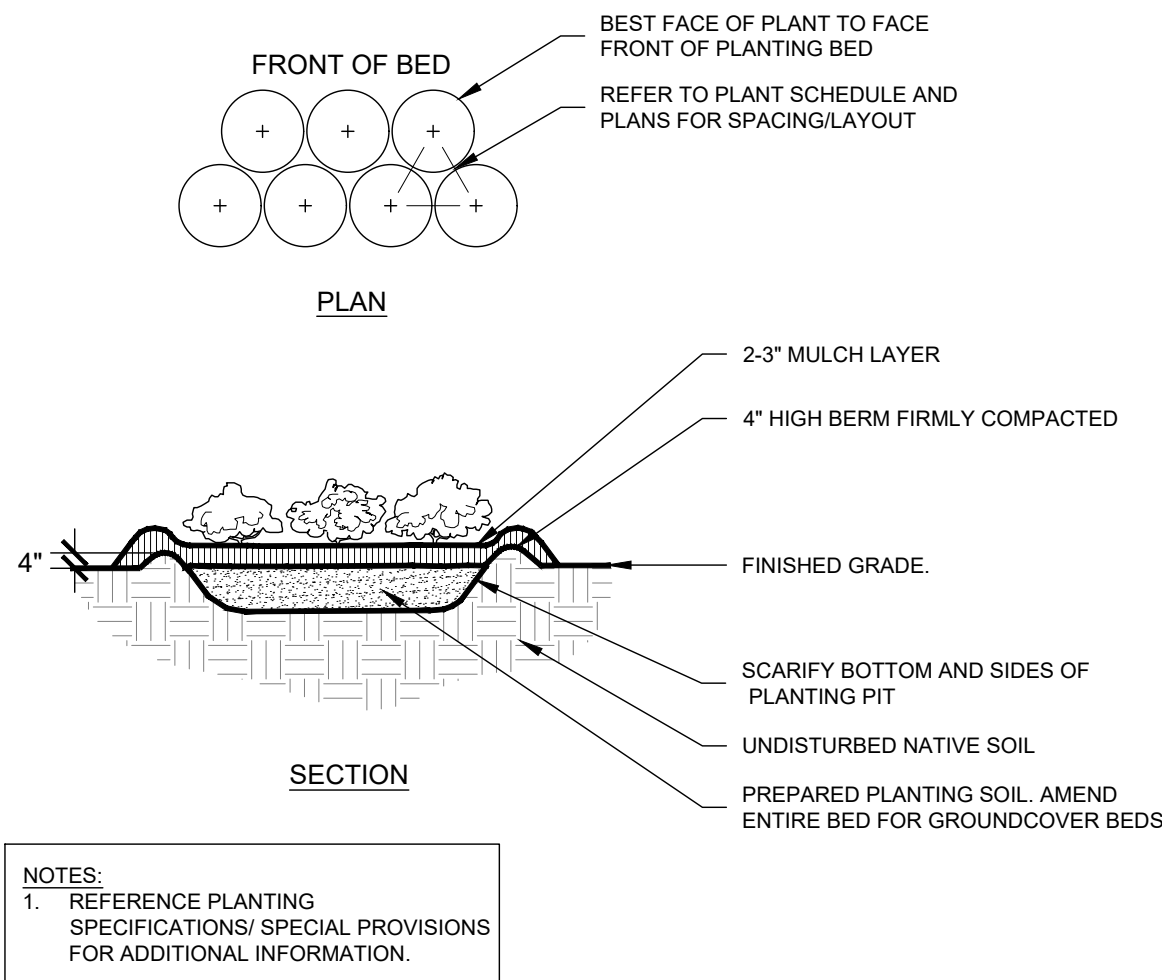
E TYPICAL TREE PLANTING IN TREE GRATE

NTS



B TYPICAL SHRUB PLANTING

NTS



C TYPICAL GROUNDCOVER PLANTING

NTS

NOTES:

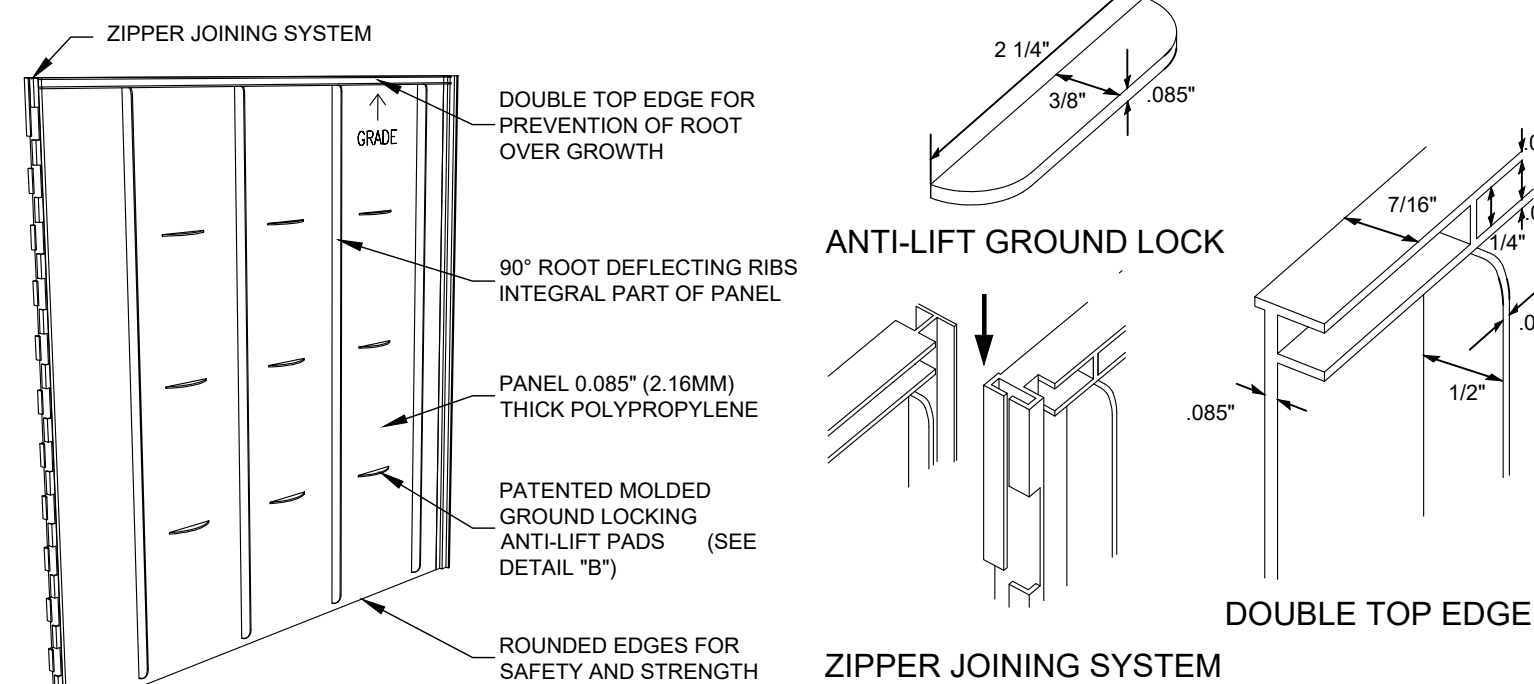
SPECIFIED TREE ROOT BARRIERS ARE A MECHANICAL BARRIER AND ROOT DEFLECTOR TO PREVENT TREE ROOTS FROM DAMAGING ADJACENT PAVING / HARDSCAPE ELEMENTS. ASSEMBLED IN 2' LONG MODULES OR FOR LINEAR APPLICATIONS DIRECTLY BESIDE AN ADJACENT HARDSCAPE AREA TO ONE SIDE OF THE TREES (LINEAR PLANTING STYLE).

MATERIALS:

1. THE CONTRACTOR SHALL FURNISH AND INSTALL TREE ROOT BARRIERS AS SPECIFIED. THE TREE ROOT BARRIERS SHALL BE PRODUCT # UB 24-2 AS MANUFACTURED BY DEEP ROOT PARTNERS, L.P. 530 WASHINGTON STREET, SAN FRANCISCO, CA 94111 (800-458-7668), OR APPROVED EQUAL. THE BARRIER SHALL BE BLACK, INJECTION MOLDED PANELS, OF 0.085" WALL THICKNESS IN MODULES 24" LONG BY 24" DEEP, MANUFACTURED WITH A MINIMUM 50% POST CONSUMER RECYCLED POLYPROPYLENE PLASTIC WITH ADDED ULTRAVIOLET INHIBITORS; RECYCLABLE.

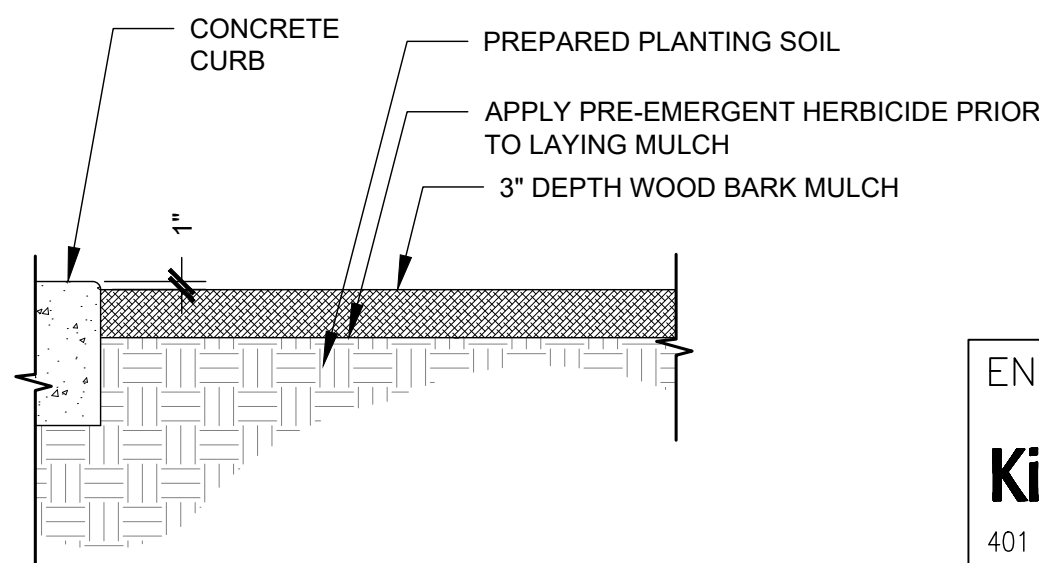
CONSTRUCTION AND INSTALLATION:

1. THE CONTRACTOR SHALL INSTALL THE TREE ROOT BARRIERS WITH THE NUMBER OF PANELS AND IN THE MANNER SHOWN ON THE DRAWINGS. THE VERTICAL ROOT DEFLECTING RIBS SHALL BE FACING INWARDS TO THE ROOT BALL AND THE TOP OF THE DOUBLE EDGE SHALL BE 1/2" ABOVE GRADE. EACH OF THE REQUIRED NUMBER OF PANELS SHALL BE CONNECTED EITHER TO FORM A CIRCLE AROUND THE ROOT BALL OR BE JOINED IN A LINEAR FASHION AND PLACED ALONG THE ADJACENT HARDSCAPE.
2. EXCAVATION AND SOIL PREPARATION SHALL CONFORM TO THE DRAWINGS



F ROOT CONTROL BARRIER

NTS



G WOOD BARK MULCH

NTS

ENGINEER OF WORK:

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RANDALL KOPFF P.L.A. 6633



10-11-2023

DATE

10TH STREETSCAPE IMPROVEMENTS PROJECT LANDSCAPE DETAILS

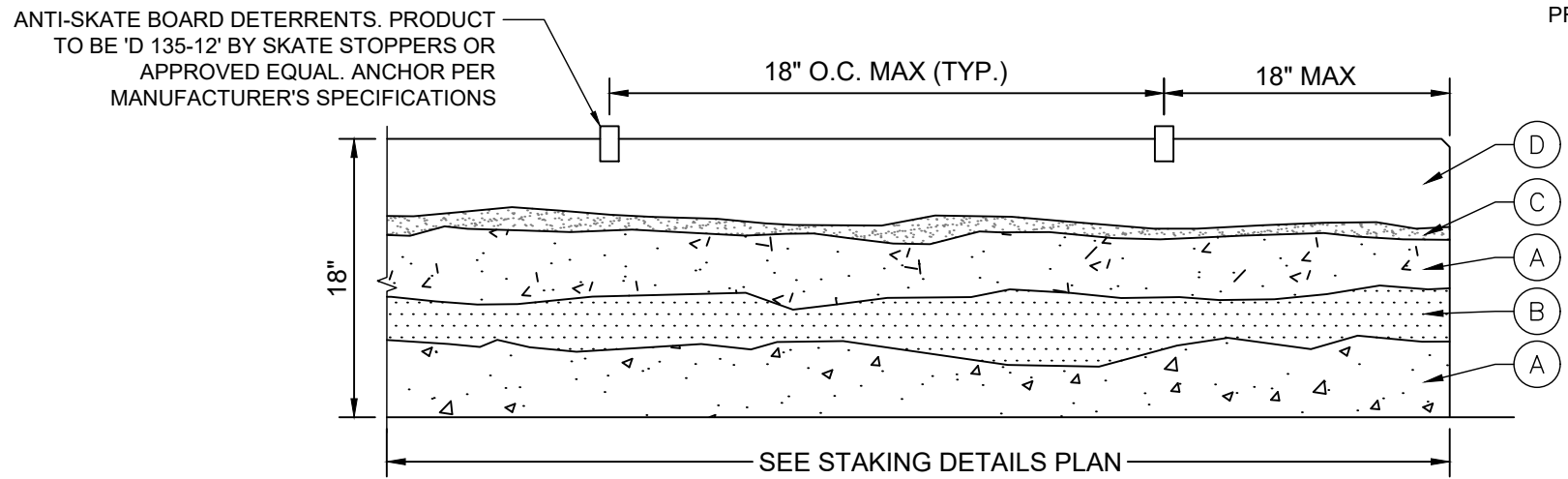
CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 15 OF 22 SHEETS

W.O. NO. CIP S22-107

FOR CITY ENGINEER		DATE			DIVISION HEAD
DESCRIPTION	BY	APPROVED	DATE	FILMED	DESIGN ENGINEER
ORIGINAL	KH				
					NAD 83 COORDINATES
					LAMBERT COORDINATES
CONTRACTOR		DATE STARTED		S22-107- 15-D	
INSPECTOR		DATE COMPLETED			

BID SET PLANS - NOT FOR CONSTRUCTION

Plotted By: Rokosz, Cody Sheet Set: KHA Layout: URBAN DESIGN DETAILS October 11, 2023 04:12:39pm \\Sndfp01\ca_snd\1\SND_MUN\95243012 - 10th Streetscape Improvements\Design\Plan Sheets\243012-LS.dwg



LEGEND

- (A) NATURAL GRAY CONCRETE WITH 30% EMBEDDED COBBLE (SOUTHWEST BOULDER AND STONE) "MEXICAN BEACH PEBBLES, MIXED" 2"-3") OR APPROVED EQUAL.
- (B) INTEGRAL COLOR CONCRETE (DAVIS "SEQUOIA SAND") WITH 60% EMBEDDED PEBBLES AND SHELLS (SOUTHWEST BOULDER AND STONE "CRIVA PEBBLES, SEASHORE BLEND") OR APPROVED EQUAL.
- (C) 100% COBBLE LAYER (SOUTHWEST BOLDER AND STONE "SANTA FE COBBLE 1"-2") OR APPROVED EQUAL.
- (D) NATURAL GRAY COLOR CONCRETE WITH 30% EMBEDDED SEA SHELLS (SOUTHWEST BOULDER AND STONE "SEA SHELLS") OR APPROVED EQUAL.
- (E) NATURAL GRAY COLOR CONCRETE

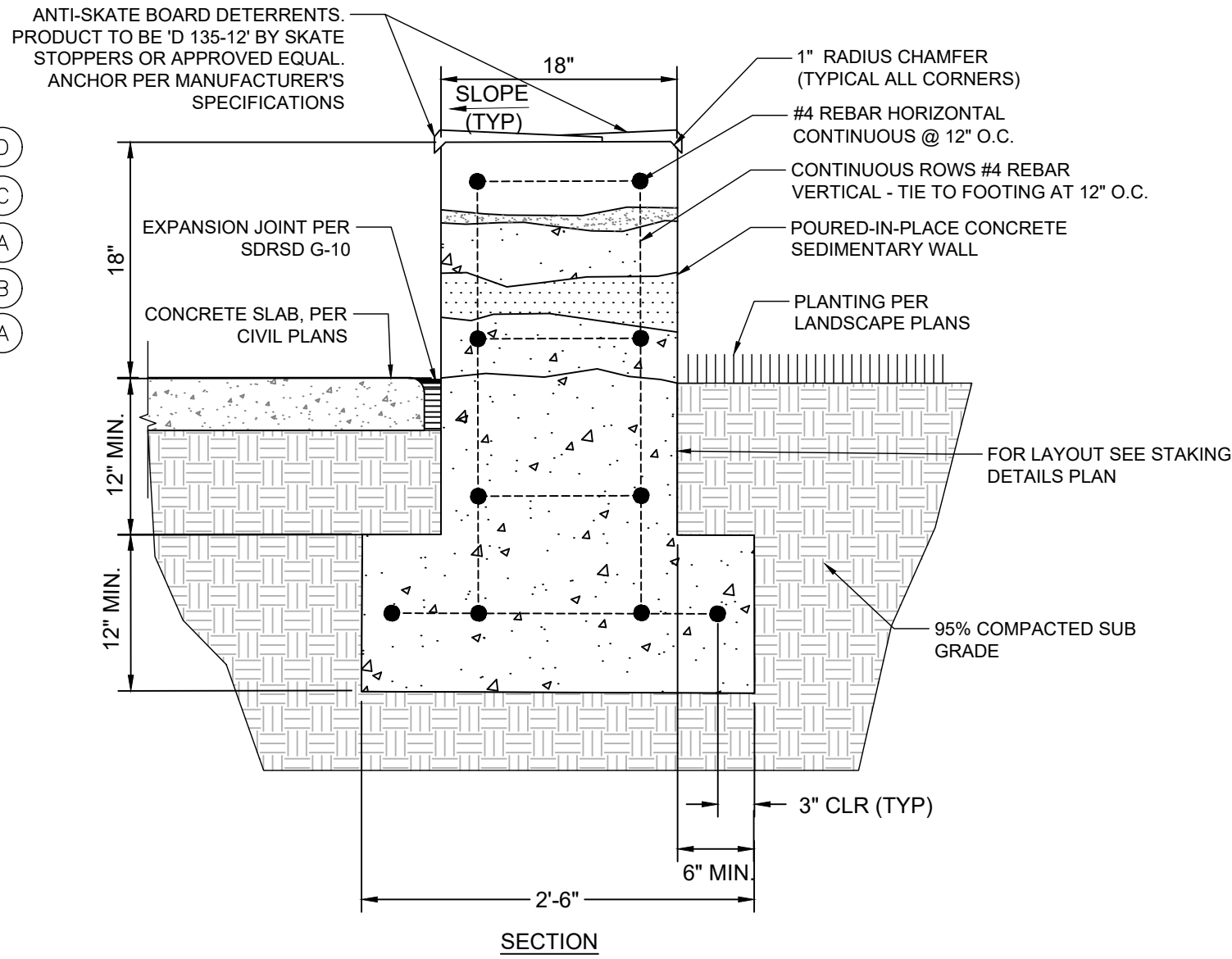
NOTE:

1. DESIGN INTENT ONLY. CONTRACTOR TO SUBMIT SHOP DRAWINGS WITH STRUCTURAL REVIEW AND CERTIFICATION REQUIRED PRIOR TO CONSTRUCTION.

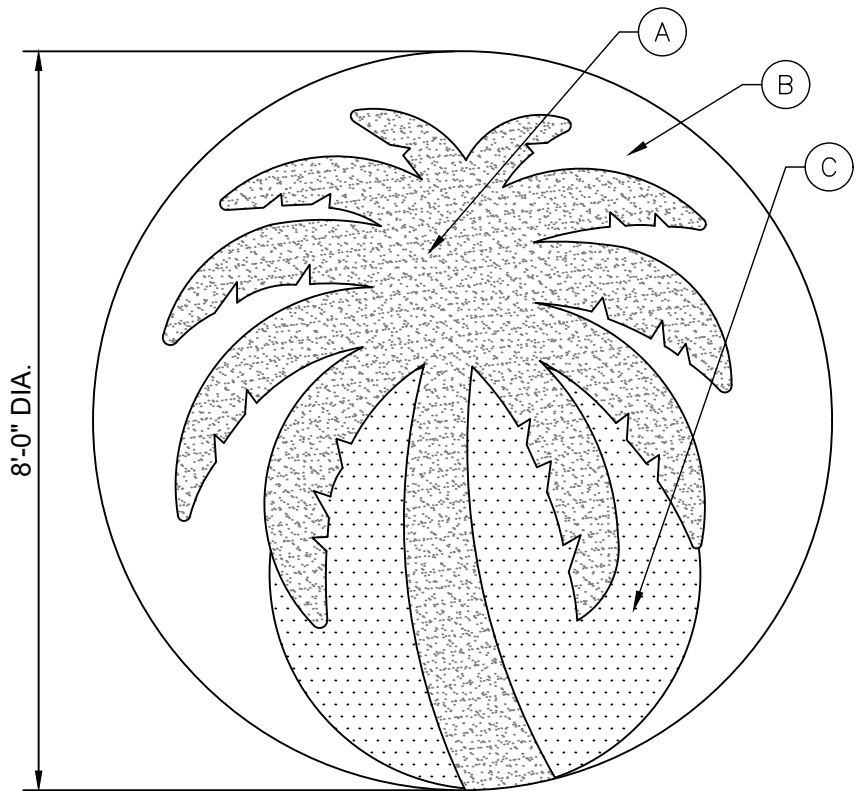
2. CONTRACTOR TO PROVIDE LINEAR SAMPLE PANEL FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION SEE SPECIFICATIONS.

A SEAT WALL

NTS



SECTION



LEGEND

- (A) LITHOMOSAIC TILES OR APPROVED EQUAL. COLOR TO BE DARK GRAY. 1/8" SPACING MAXIMUM. 75% TILE COVERAGE.
- (B) LITHOMOSAIC TILES OR APPROVED EQUAL. COLOR TO BE ORANGE. 1/8" SPACING MAXIMUM. 75% TILE COVERAGE.
- (C) LITHOMOSAIC TILES OR APPROVED EQUAL. COLOR TO BE DARK YELLOW. 1/8" SPACING MAXIMUM. 75% TILE COVERAGE.

NOTES:

1. DESIGN INTENT ONLY. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

2. FINAL ORIENTATION TO BE DETERMINED IN FIELD BY OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

3. CONTRACTOR TO PROVIDE 4' X 4' SAMPLE PANEL FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

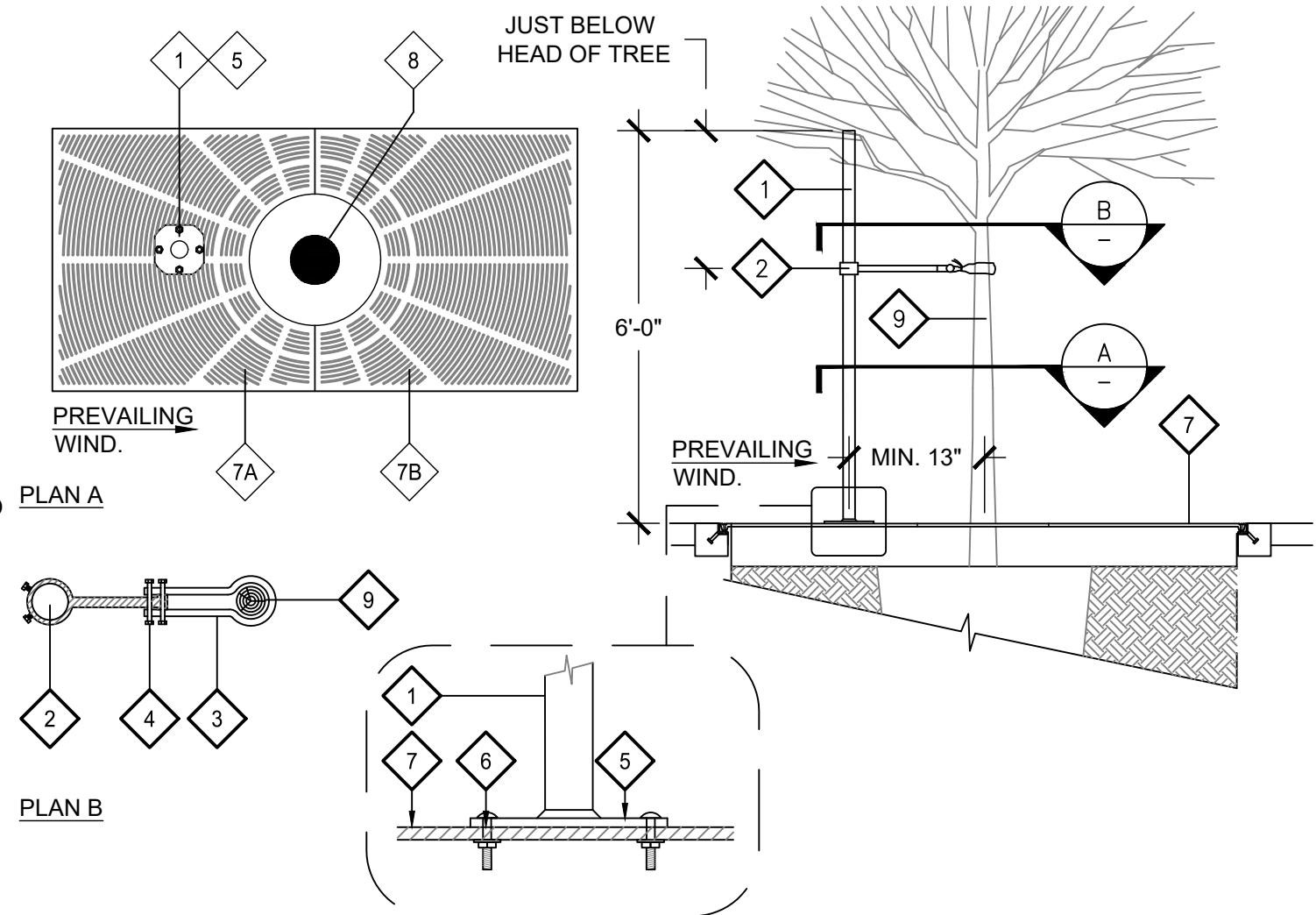
4. CONCRETE BASE TO BE STANDARD GRAY WITH A SMOOTH FINISH.

B DECORATIVE PAVING FEATURE

NTS

LEGEND

1. "GRATE STAKE". 3/4" DIAMETER SCHEDULE 40 STEEL PIPE. POWDER-COATED BLACK.
2. STRAP BAR. .1865" X 12" FLAT BAR. SECURED WITH (2) SET BOLTS.
3. ADJUSTABLE VINYL STRAP. MINIMUM 1/4" X 1" X 18" 90 DURO FLEX PVC STRAP WITH UV INHIBITORS.
4. (2) 1/4" X 1-1/4" BOLTS, WASHERS AND NUTS.
5. STAKE PLATE.
6. SECURE TO GRATE WITH (4) 5/16" CARRIAGE BOLTS, WASHERS AND NUTS.
7. TREE GRATE. A. HALF 1 B. HALF 2
8. TREE.



C TREE GRATE STAKE

NTS

ENGINEER OF WORK:

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RANDALL KOPFF P.L.A. 6633



10-11-2023
DATE

10TH STREETSCAPE IMPROVEMENTS PROJECT
URBAN DESIGN DETAILS

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 16 OF 22 SHEETS

W.O. NO. CIP S22-107

FOR CITY ENGINEER					DATE	DIVISION HEAD
DESCRIPTION	BY	APPROVED	DATE	FILMED		
ORIGINAL	KH					DESIGN ENGINEER
						NAD 83 COORDINATES
						LAMBERT COORDINATES
CONTRACTOR					DATE STARTED	S22-107- 16-D
INSPECTOR					DATE COMPLETED	


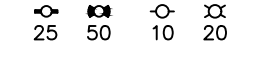



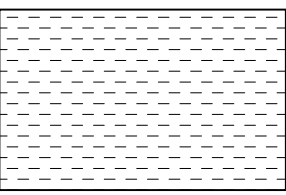









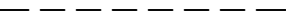
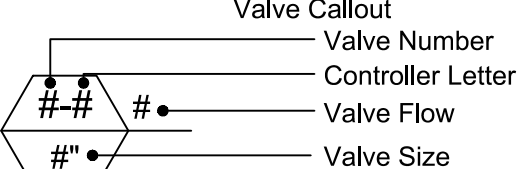
BID SET PLANS - NOT FOR CONSTRUCTION

Plotted By:Rokosz, Cody Sheet Set:Kha Layout:IRRIGATION NOTES October 11, 2023 04:12:56pm \\SND\FP01\CA_SND1\SND\MUNI\195243012 - 10th Streetscape Improvements\Design\Plan Sheets\24-3012-IR.dwg

CRITICAL ANALYSIS

Generated:	2023-09-05 09:29
P.O.C. NUMBER: 01	
Water Source Information:	Irrigation Water
Meter - See Civil Plans	
FLOW AVAILABLE	
Water Meter Size:	3/4"
Flow Available:	22.5 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	65 PSI
Elevation Change:	5.00 ft
Service Line Size:	2"
Length of Service Line:	20 ft
Pressure Available:	63 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	12 GPM
Flow Available at POC:	22.5 GPM
Residual Flow Available:	10.5 GPM
Critical Station:	1
Design Pressure:	30 PSI
Friction Loss:	1.71 PSI
Fittings Loss:	0.17 PSI
Elevation Loss:	0 PSI
Loss through Valve:	3 PSI
Pressure Req. at Critical Station:	34.9 PSI
Loss for Fittings:	0.24 PSI
Loss for Main Line:	2.44 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	4.2 PSI
Loss for Master Valve:	1.05 PSI
Loss for Water Meter:	2.2 PSI
Critical Station Pressure at POC:	45.0 PSI
Pressure Available:	63 PSI
Residual Pressure Available:	18.0 PSI

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
	HUNTER PROS-PRS30-00-MSBN MULTI-STREAM BUBBLER, FIXED RISER, 25=.25GPM, 50=0.5GPM, 10=1.0GPM, 20=2.0GPM.	2	30
	HUNTER PROS-PRS30-06-CV-PCN FLOOD BUBBLER, 6IN. POP-UP, FACTORY INSTALLED DRAIN CHECK VALVE.	24	15
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	HUNTER ICZ-101-40 DRIP CONTROL ZONE KIT. 1IN. ICV GLOBE VALVE WITH 1IN. HY100 FILTER SYSTEM. PRESSURE REGULATION: 40PSI. FLOW RANGE: 2 GPM TO 20 GPM. 150 MESH STAINLESS STEEL SCREEN.	2	
	NETAFIM TLAVRV AIR/VACUUM RELIEF VALVE, 1/2IN. MALE PIPE THREAD.	2	
	HUNTER ECO-ID-12 ECO-ID: 1/2IN. FPT CONNECTION WITH 15 PSI - 100 PSI OPERATING PRESSURE. SPECIFY WITH HUNTER SJ SWING JOINT.	2	
	AREA TO RECEIVE DRIPLINE NETAFIM TLCV-06-18 TECHLINE PRESSURE COMPENSATING LANDSCAPE DRIPLINE WITH CHECK VALVE. 0.6 GPH EMITTERS AT 18" O.C. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. 17MM.	2,886 S.F.	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	HUNTER IBV-DC 1IN., 1-1/2IN., 2IN., AND 3IN. BRASS ELECTRIC REMOTE CONTROL VALVE, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE. WITH DC LATCHING SOLENOID FACTORY INSTALLED OPTION.	2	
	HUNTER HQ-44LRC QUICK COUPLER VALVE, YELLOW RUBBER LOCKING COVER, RED BRASS AND STAINLESS STEEL, WITH 1IN. NPT INLET, 2-PIECE BODY.	3	
	HAYWARD TRUE UNION TB SERIES SHUT OFF VALVE. NORMALLY OPEN. SIZE TO MATCH MAINLINE DIA.	4	
	ZURN 350 1" 3/4IN. - 2IN. DOUBLE CHECK VALVE ASSEMBLY BACKFLOW PREVENTER W/ EZSWAP.	1	
	DIG CORPORATION LEIT 4008 EIGHT STATIONS OPERATE WITH A MASTER VALVE OR PUMP START. SELF-CONTAINED WATER MANAGEMENT IRRIGATION CONTROLLER THAT HARNESSSES SOLAR AS A POWER SOURCE. SUSTAINABLE.	1	
	HUNTER RAIN-CLIK-NO RAIN SENSOR, WITH CONDUIT INSTALLATION, NORMALLY OPEN, MOUNT AS NOTED	1	
	WATER METER 3/4" IRRIGATION WATER METER - SEE CIVIL PLANS	1	
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40	1,211 L.F.	
	IRRIGATION MAINLINE: PVC SCHEDULE 40	432.1 L.F.	
	PIPE SLEEVE: PVC SCHEDULE 40	641.4 L.F.	
<div>Valve Callout</div> <div></div> <div>Valve Number Controller Letter Valve Flow Valve Size</div>			


VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC	PRECIP
1	HUNTER IBV-DC	1"	BUBBLER	12	34.9	45.0	1.85 in/h
2	HUNTER ICZ-101-40	1"	AREA FOR DRIPLINE	8.48	22.7	29.8	0.43 in/h
3	HUNTER IBV-DC	1"	BUBBLER	2	17.2	22.2	1.74 in/h
4	HUNTER ICZ-101-40	1"	AREA FOR DRIPLINE	4.36	19.8	26.5	0.43 in/h

IRRIGATION NOTES

- THE SYSTEM HAS BEEN DESIGNED TO PROVIDE 100% COVERAGE. ANY CHANGES MADE IN THE LAYOUT DUE TO FIELD CONDITIONS SHALL BE IN ACCORDANCE WITH THESE STANDARDS. QUANTITIES IN SCHEDULE ARE ESTIMATED. PLAN SHALL TAKE PRECEDENCE.
- ALL IRRIGATION LINES AND VALVES ARE SHOWN DIAGRAMMATICALLY. ALL LINES AND VALVES TO BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE.
- CONTRACTOR TO FIELD LOCATE ALL PROPOSED IRRIGATION WATER MAIN LINE LOCATIONS. CONTACT LANDSCAPE ARCHITECT PRIOR TO START OF WORK IF DISCREPANCIES BETWEEN THIS PLAN AND EXISTING CONDITIONS ARE FOUND.
- LOCATE ALL VALVES INSIDE LANDSCAPE AREAS, ALLOWING ACCESS FOR MAINTENANCE PURPOSES, BUT HIDING THEM FROM PUBLIC VIEW WHENEVER POSSIBLE.
- ALL PRESSURE MAINLINES UNDER ASPHALT PAVEMENT SHALL BE PLACED WITHIN SLEEVES AS NOTED. WHERE ELECTRIC VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER CONDUIT.
- CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT.
- ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR, WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF EACH SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS. ALL SLEEVES SHALL BE SIZED TWO PIPE SIZES GREATER THAN PIPE IT CARRIES.
- ALL DRIP ZONES SHALL BE INSTALLED WITH A SELF-FLUSHING DISC FILTER, OR APPROVED EQUAL
- IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE HIGHWAY JURISDICTION.
- VERIFY CONTROLLER AND RAIN SENSOR LOCATION AND MAINLINE POINT OF CONNECTION AT PROJECT SITE WITH OWNER.
- ELECTRIC SERVICE TO CONTROLLER SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
- ALL 24 VAC WIRING SHALL BE OF DIRECT BURIAL COPPER WIRE AS FOLLOWS:
 - CONTROL WIRES - #14
 - COMMON WIRES - #12
- INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON THE SITE.
- COORDINATE WITH PLANTING PLAN FOR PLANTER BED LOCATIONS AND TREE LOCATIONS.
- PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH DEVELOPER FOR OPERATING PARAMETERS OF MASTER SYSTEM. THIS DESIGN REQUIRES XX PSI TO OPERATE. IF THE MASTER SYSTEM CANNOT PROVIDE THESE PARAMETERS, CONTRACTOR SHALL MAKE ADJUSTMENTS TO THE DESIGN BY ADDING CONTROL VALVES, A BOOSTER PUMP, PRESSURE REDUCING VALVE, OR OTHER EQUIPMENT, AS NECESSARY. CONTRACTOR SHALL SUBMIT DESIGN REVISIONS TO OWNERS REPRESENTATIVE FOR APPROVAL PRIOR TO SUBMITTING BID.
- A FINAL REPORT FOR THE TESTING AND ADJUSTING OF ALL NEW SYSTEMS SHALL BE COMPLETED PRIOR TO FINAL APPROVAL BY THE FIELD INSPECTOR. THIS REPORT SHALL BE SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESES SERVICES.
- A LAMINATED DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.
- A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE SIGNER OF THE LANDSCAPE PLANS, THE SIGNER OF THE IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.
- AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION.

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AB-1881 AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN.


RANDALL A. KOPFF JR, LLA 6633

MAINTENANCE:

- LOW-FLOW BUBBLER ZONES WILL BE DRAINED IN COLD WEATHER SITUATIONS USING THE MANUAL FLUSH VALVES.
- FILTER CLEANING AND REPLACEMENT ON A REGULAR BASIS.
- CHECKING FOR LEAKS AT EACH VALVE AND INSPECTION OF EACH ZONE ON A MONTHLY BASIS.
- HAVE THE CONTRACTOR WALK EACH SECTION OF LOW-FLOW BUBBLERS TO CHECK FOR CLOGGING OR PROBLEMS.
- IF AN ON-SITE WEATHER STATION IS SPECIFIED, IT NEEDS TO BE CALIBRATED REGULARLY TO PROVIDE ACCURATE DATA. BECAUSE OF THE COST OF MAINTAINING AN ON-SITE WEATHER STATION, IT IS RECOMMENDED TO USE A CONTROL SYSTEM WHICH UTILIZES A NETWORK OF ET DATA THAT CAN ASSURE ACCURACY TO WITHIN ON KILOMETER OF THE SITE.

IRRIGATION MAINTENANCE SCHEDULE:

THE IRRIGATION MAINTENANCE SCHEDULE TASKS LISTED BELOW ARE INTENDED A S MINIMUM STANDARDS AND MORE FREQUENT ATTENTION MAY BE REQUIRED DEPENDING ON THE PARTICULAR SITE CONDITIONS. MAINTENANCE SHALL BE DONE TO ENSURE WATER EFFICIENCY. REPAIR OF IRRIGATION EQUIPMENT SHALL BE DONE WITH THE ORIGINALLY SPECIFIED MATERIALS OR APPROVED EQUIVALENTS.

FREQUENCY - QUARTERLY

TASK - CONTROLLER CABINET : OPEN CABINET AND CLEAN OUT DEBRIS AND REPLACE BATTERY AS NECESSARY.CHECK WIRING AND REPAIR AS NEEDED AND CHECK CLOCK AND RESET IF NECESSARY.

FREQUENCY - MONTHLY

TASK - IRRIGATION SCHEDULE: ADJUST SCHEDULE FOR SEASONAL VARIATIONS AND OTHER CONDITIONS WHICH MAY AFFECT THE AMOUNT OF WATER NEEDED TO MAINTAIN PLANT HEALTH. ADJUST AS NECESSARY.

FREQUENCY - QUARTERLY

TASK - POC: VISUALLY INSPECT COMPONENTS FOR LEAKS, PRESSURE SETTINGS, SETTLEMENT OR OTHER DAMAGE AFFECTING THE OPERATION OF A COMPONENT. REPAIR AS NEEDED.

FREQUENCY - QUARTERLY

TASK - REMOTE CONTROL VALVES : ISOLATION VALVES AND QUICK COUPLER VALVES: VISUALLY INSPECT FOR LEAKS, SETTLEMENTS, WIRE CONNECTIONS AND PRESSURE SETTINGS. REPAIR AS NEEDED.

FREQUENCY - QUARTERLY

TASK - MAINLINE AND LATERALS: VISUALLY INSPECT FOR LEAKS OR SETTLEMENTS OF TRENCH.

FREQUENCY - WEEKLY

TASK - FILTERS AND STRAINERS - VISUALLY CHECK FOR ANY BROKEN MALIGNED OR CLOGGED HEADS, HEADS WITH INCORRECT ARC, INADEQUATE COVERAGE OR OVERSPRAY AND LOW HEAD DRAINAGE. REPAIR AS NEEDED.

FREQUENCY - MONTHLY

TASK - FILTERS AND STRAINERS: VISUALLY CHECK FOR LEAKS, BROKEN FITTINGS. CLEAN AND FLUSH SCREENS.

STATE OF CALIFORNIA ESTIMATED WATER USE

TOTAL WATER USE IS CALCULATED BY SUMMING THE AMOUNT OF WATER ESTIMATED FOR EACH HYDROZONE. WATER USE FOR EACH HYDROZONE IS ESTIMATED WITH THE FOLLOWING FORMULA:

EWU (HYDROZONE) = ESTIMATED WATER USE (GAL / YEAR)
ETO = REFERENCE EVAPOTRANSPIRATION (INCHES / YEAR)
PF = PLANT ETO ADJUSTMENT FACTOR
HA = HYDROZONE AREA (S.F.)
.62 = CONVERSION FACTOR
IE = IRRIGATION EFFICIENCY
SLA = SPECIAL LANDSCAPE AREA (S.F.)

EWU (HYDROZONE) = (ETO * PF * HA * .62) / (IE)

HYDROZONE A (DRIP)

ETO	PF	HA	IE	CONVERSION FACTOR	EWU GAL/YEAR
44.5	.2	2886	.81	.62	19660

HYDROZONE B (LOW WATER BUBBLER)

ETO	PF	HA	IE	CONVERSION FACTOR	EWU GAL/YEAR
44.5	.4	448	.75	.62	6592

ESTIMATED TOTAL WATER USE (ETWU)

26253

MAWA (MAXIMUM APPLIED WATER ALLOWANCE)

ETO	ET ADJUSTMENT FACTOR	TOTAL HA	CONVERSION FACTOR	MAWA
44.5	.45	3334	.62	41393

ESTIMATED ANNUAL WATER USE (% OF MAWA)

63

10TH STREETSCAPE IMPROVEMENTS PROJECT
IRRIGATION NOTES

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 17 OF 22 SHEETS

W.O. NO. CIP S22-107

FOR CITY ENGINEER					DATE	DIVISION HEAD
DESCRIPTION	BY	APPROVED	DATE	FILMED		
ORIGINAL	KH					DESIGN ENGINEER
						NAD 83 COORDINATES
						LAMBERT COORDINATES
CONTRACTOR		DATE STARTED				
INSPECTOR		DATE COMPLETED				

S22-107- 17-D

ENGINEER OF WORK:

Kimley»Horn Kimley-Horn
and Associates, Inc. ©2023
401 B Street, Suite 600, San Diego, California 92101
Phone: 619.234.9411 / www.kimley-horn.com

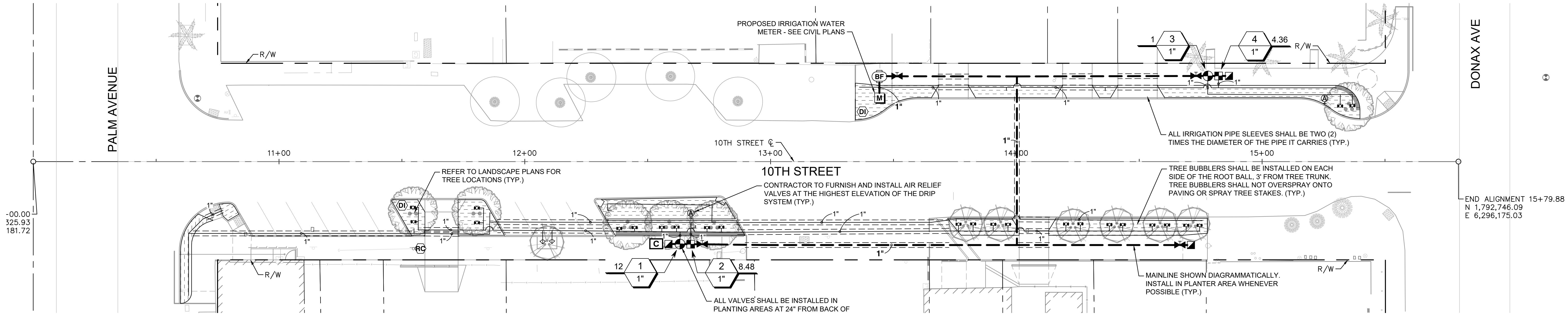

RANDALL KOPFF P.LA. 6633



10-11-2023
DATE

BID SET PLANS - NOT FOR CONSTRUCTION

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IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	HUNTER PROS-PRS30-00-MSBN MULTI-STREAM BUBBLER, FIXED RISER, 25=25GPM, 50=0.5GPM, 10=1.0GPM, 20=2.0GPM.	2	30		HAYWARD TRUE UNION TB SERIES SHUT OFF VALVE. NORMALLY OPEN. SIZE TO MATCH MAINLINE DIA.	4
	HUNTER PROS-PRS30-06-CV-PCN FLOOD BUBBLER, 6IN. POP-UP, FACTORY INSTALLED DRAIN CHECK VALVE.	24	15		ZURN 350 1" 3/4IN. - 2IN. DOUBLE CHECK VALVE ASSEMBLY BACKFLOW PREVENTER W/ EZSWAP.	1
	HUNTER ICZ-101-40 DRIP CONTROL ZONE KIT. 1IN. ICV GLOBE VALVE WITH 1IN. HY100 FILTER SYSTEM. PRESSURE REGULATION: 40PSI. FLOW RANGE: 2 GPM TO 20 GPM. 150 MESH STAINLESS STEEL SCREEN.	2			DIG CORPORATION LEIT 4008 EIGHT STATIONS OPERATE WITH A MASTER VALVE OR PUMP START. SELF-CONTAINED WATER MANAGEMENT IRRIGATION CONTROLLER THAT HARNESSSES SOLAR AS A POWER SOURCE. SUSTAINABLE.	1
	NETAFIM TLAVRV AIR/VACUUM RELIEF VALVE, 1/2IN. MALE PIPE THREAD.	2			HUNTER RAIN-CLIK-NO RAIN SENSOR, WITH CONDUIT INSTALLATION, NORMALLY OPEN, MOUNT AS NOTED	1
	HUNTER ECO-ID-12 ECO-ID: 1/2IN. FPT CONNECTION WITH 15 PSI - 100 PSI OPERATING PRESSURE. SPECIFY WITH HUNTER SJ SWING JOINT.	2			WATER METER 3/4" IRRIGATION WATER METER - SEE CIVIL PLANS	1
	AREA TO RECEIVE DRIPLINE NETAFIM TLCV-06-18 TECHLINE PRESSURE COMPENSATING LANDSCAPE DRIPLINE WITH CHECK VALVE. 0.6 GPH EMITTERS AT 18" O.C. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. 17MM.	2,886 S.F.		---	IRRIGATION LATERAL LINE: PVC SCHEDULE 40	1,211 L.F.
	HUNTER IBV-DC 1IN., 1-1/2IN., 2IN., AND 3IN. BRASS ELECTRIC REMOTE CONTROL VALVE, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE. WITH DC LATCHING SOLENOID FACTORY INSTALLED OPTION.	2		---	IRRIGATION MAINLINE: PVC SCHEDULE 40	432.1 L.F.
	HUNTER HQ-44LRC QUICK COUPLER VALVE, YELLOW RUBBER LOCKING COVER, RED BRASS AND STAINLESS STEEL, WITH 1IN. NPT INLET, 2-PIECE BODY.	3		---	PIPE SLEEVE: PVC SCHEDULE 40	641.4 L.F.

Valve Callout

Valve Number

Controller Letter

Valve Flow

Valve Size

ENGINEER OF WORK:

Kimley»Horn Kimley-Horn
and Associates, Inc. ©2023
401 B Street, Suite 600, San Diego, California 92101
Phone: 619.234.9411 / www.kimley-horn.com

RANDALL KOPFF

P.L.A. 6633



10-11-2023
DATE

10TH STREETSCAPE IMPROVEMENTS PROJECT IRRIGATION PLAN

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 18 OF 22 SHEETS

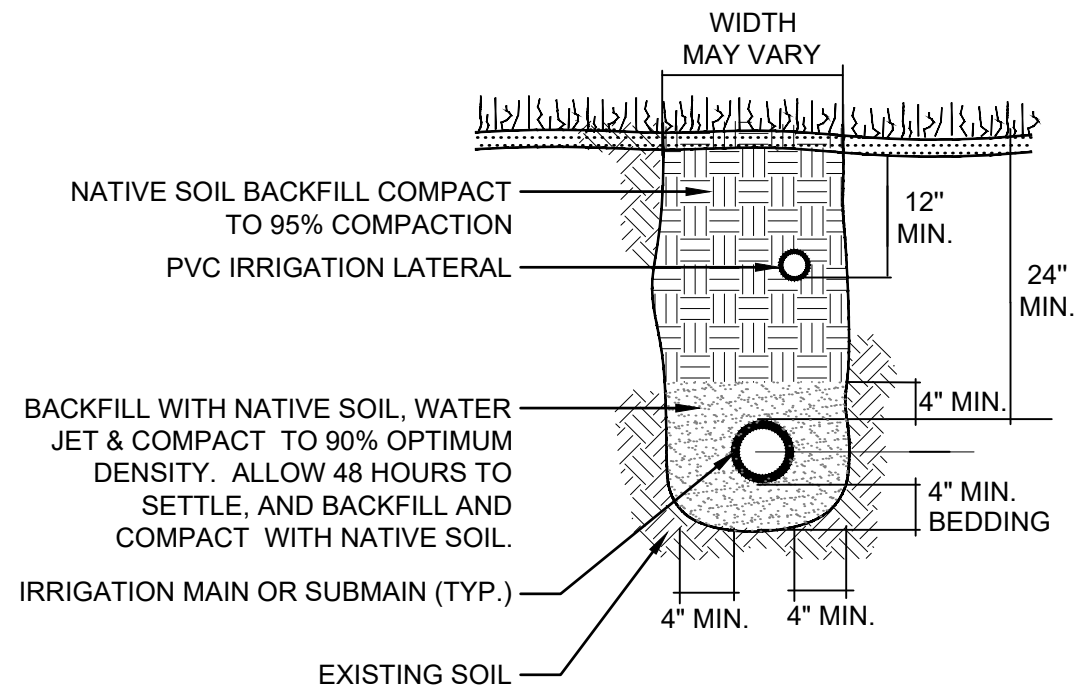
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FOR CITY ENGINEER					DATE	DIVISION HEAD
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S22-107- 18-D

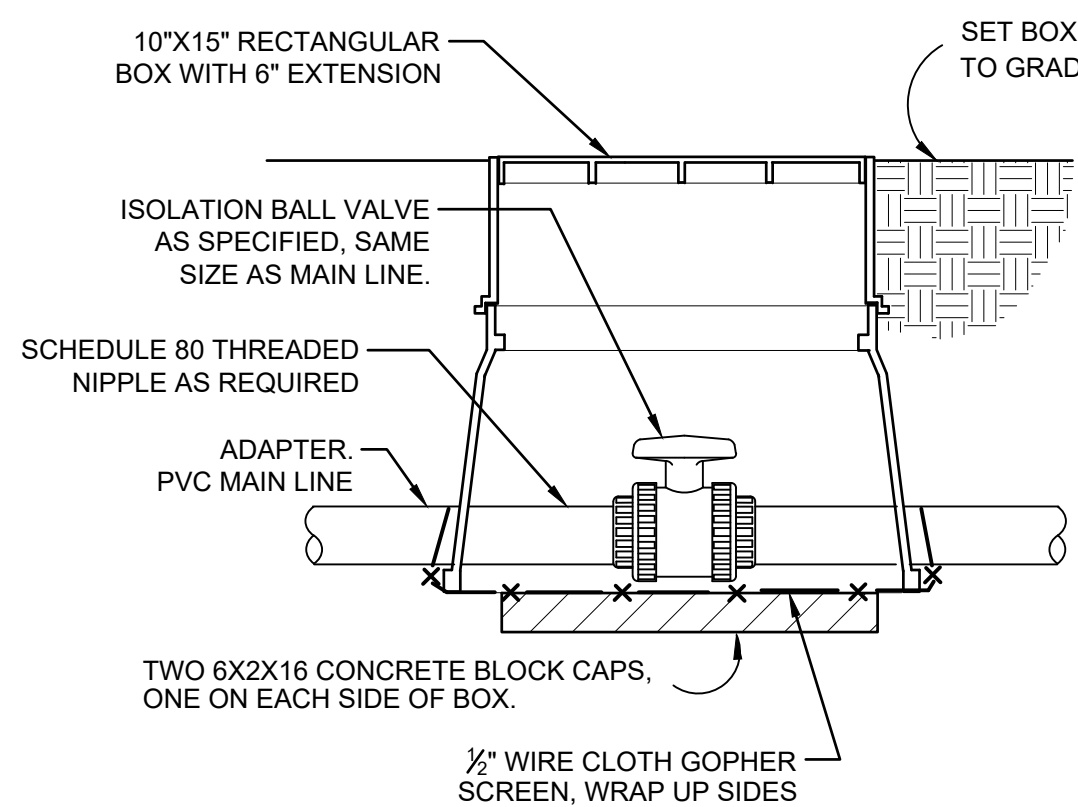
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Plotted By: Rokoosz, Cody Sheet Set: KHA Layout: IRRIGATION DETAILS October 11, 2023 04:13:08pm \\SND\F01\CA_SND1\SND_MUN\95243012 - 10th Streetscape Improvements\Design\Plan Sheets\243012-IR.dwg



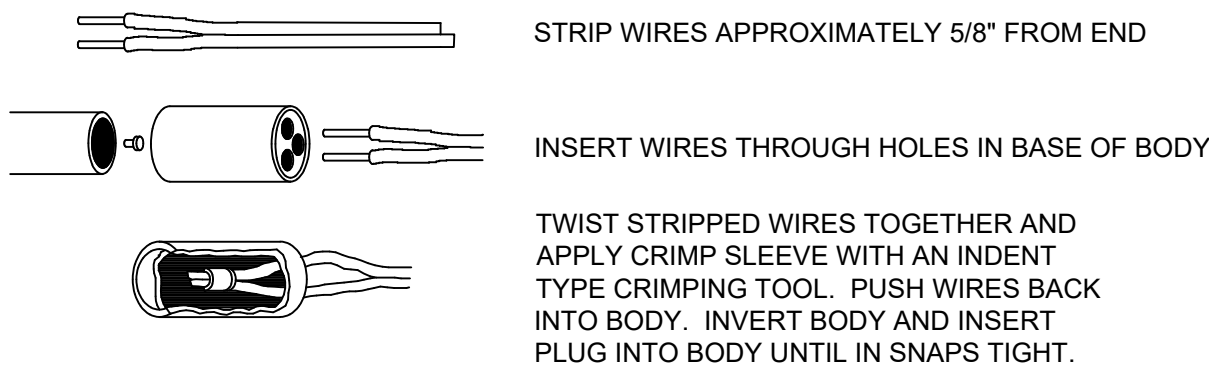
A TRENCHING DETAIL

N.T.S.



B SHUT OFF VALVE

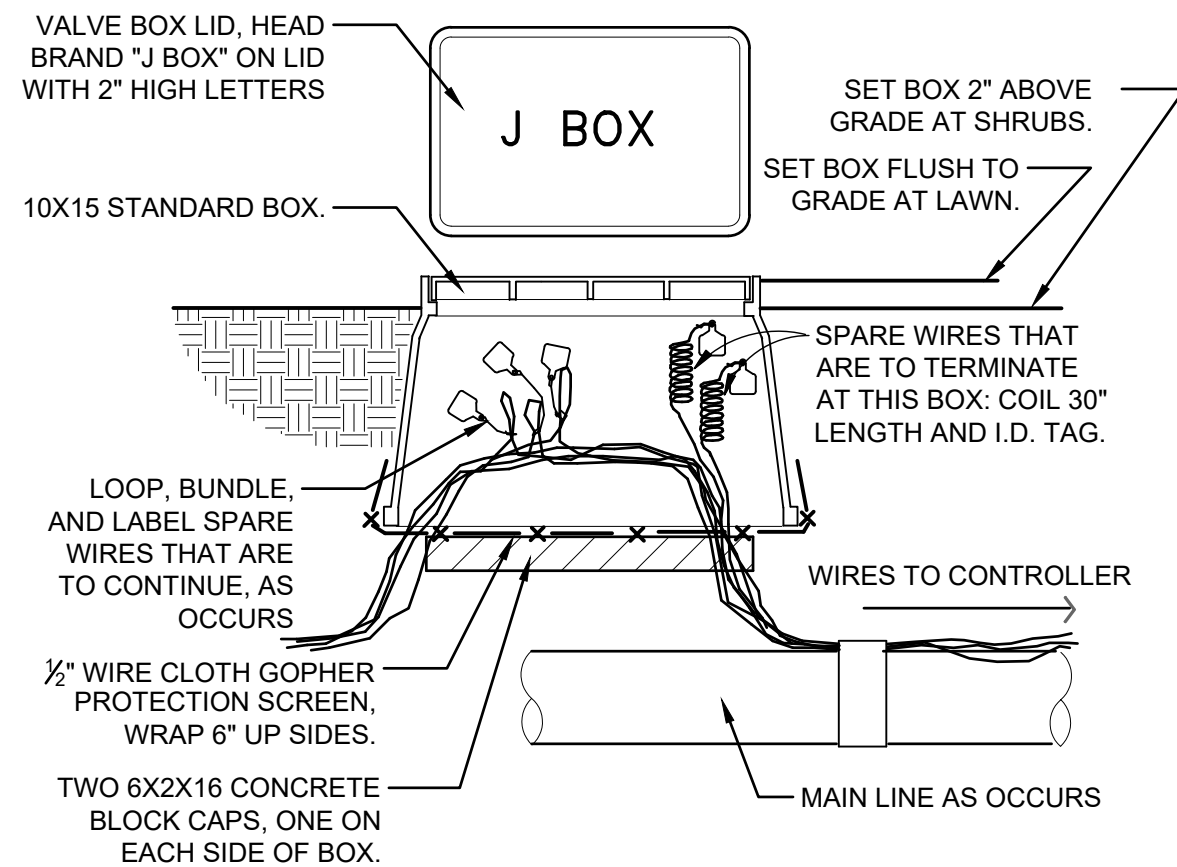
N.T.S.



- NOTES:
- ONE CONNECTOR HANDLES #10 AWG, #12 AWG AND #14 AWG WIRES.
 - WIRE CONNECTORS WILL ACCEPT THREE WIRE OR TWO WIRE CONNECTIONS.
 - WIRE CONNECTOR SHALL BE 3M DBR/DBY OR KING BROS.

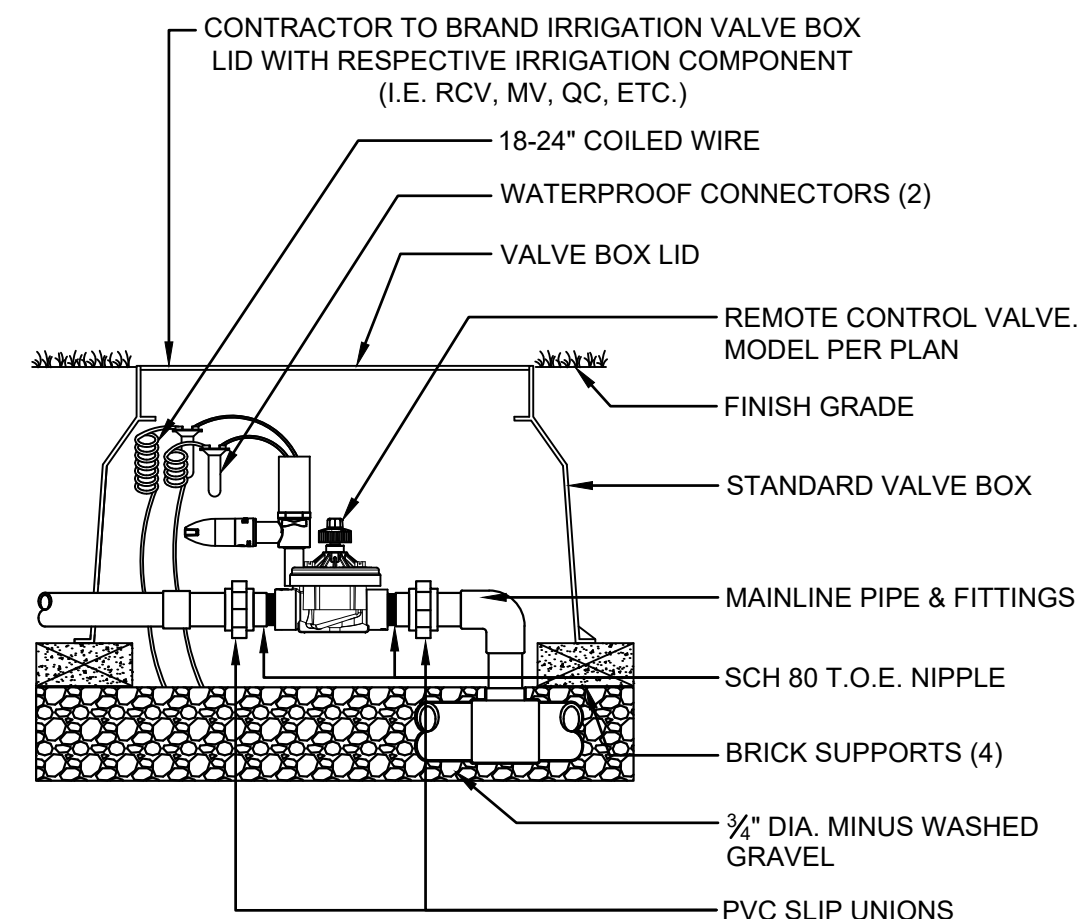
C WIRE CONNECTION

N.T.S.



D WIRE BUNDLE JUNCTION BOX

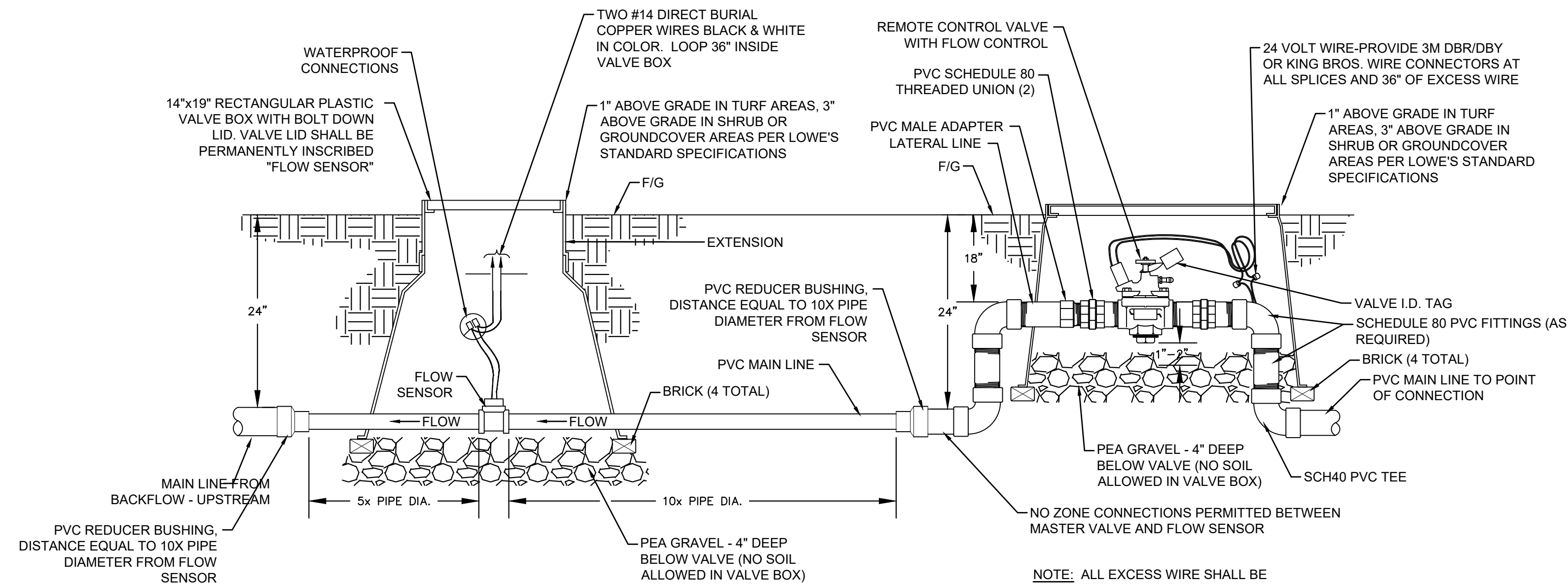
N.T.S.



NOTE: APPLY TEFLON TAPE TO ALL THREADED PIPE CONNECTIONS.

E ICV GLOBE VALVE

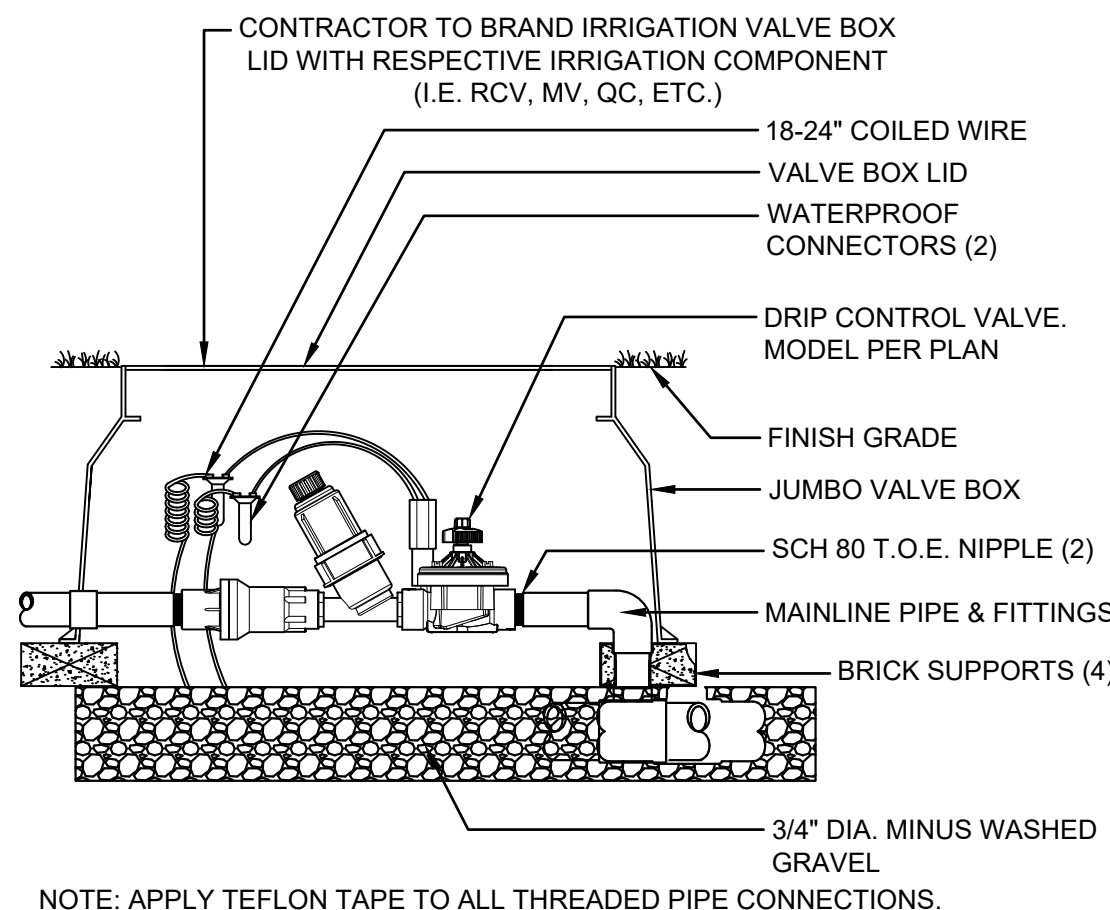
N.T.S.



NOTE: ALL EXCESS WIRE SHALL BE COILED IN A TIGHT CIRCULAR COIL.

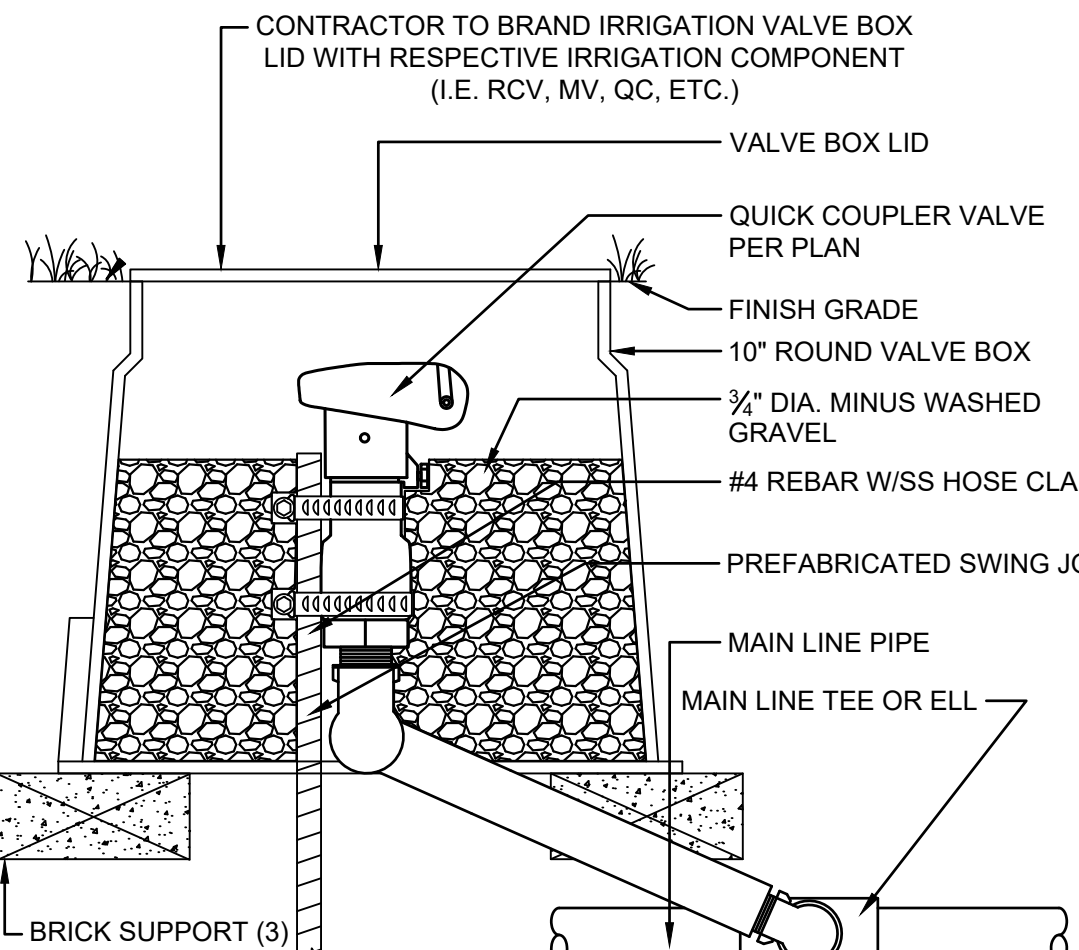
F FLOW SENSOR AND MASTER REMOTE CONTROL VALVE INSTALLATION

N.T.S.



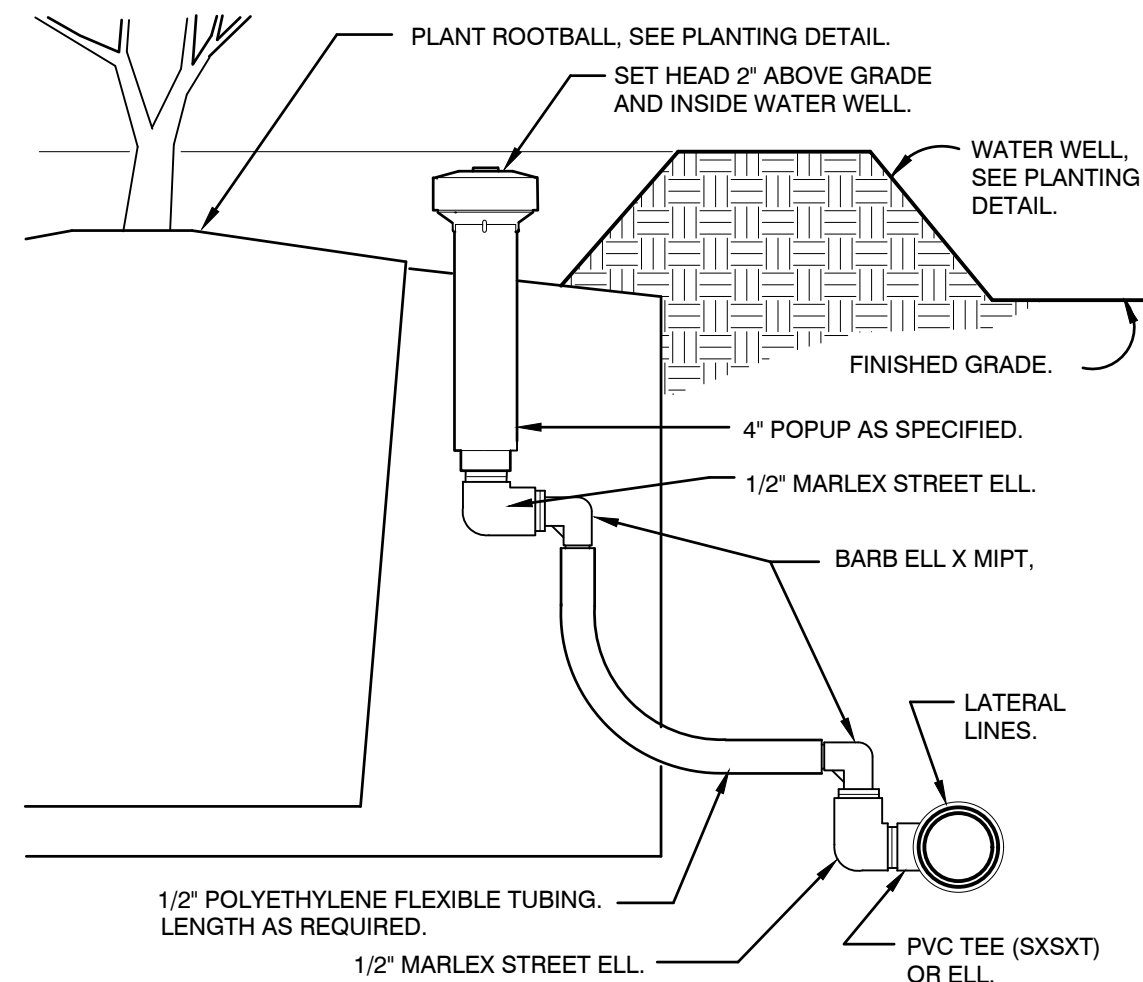
G DRIP CONTROL ZONE KIT

N.T.S.



H QUICK COUPLER VALVE

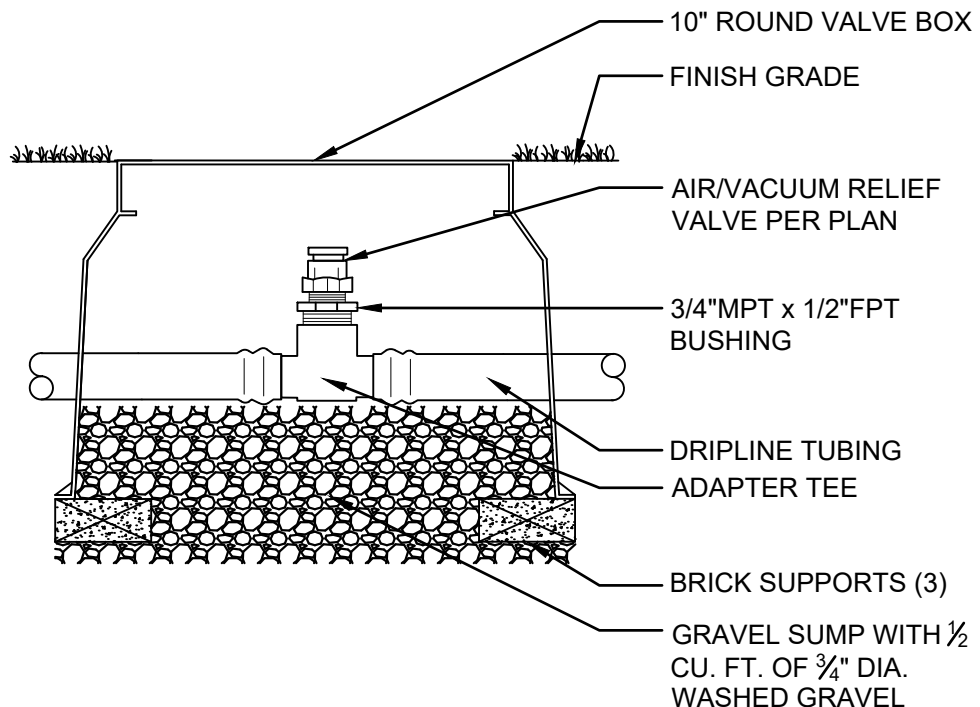
N.T.S.



I POPUB BUBBLER AT PLANT PIT

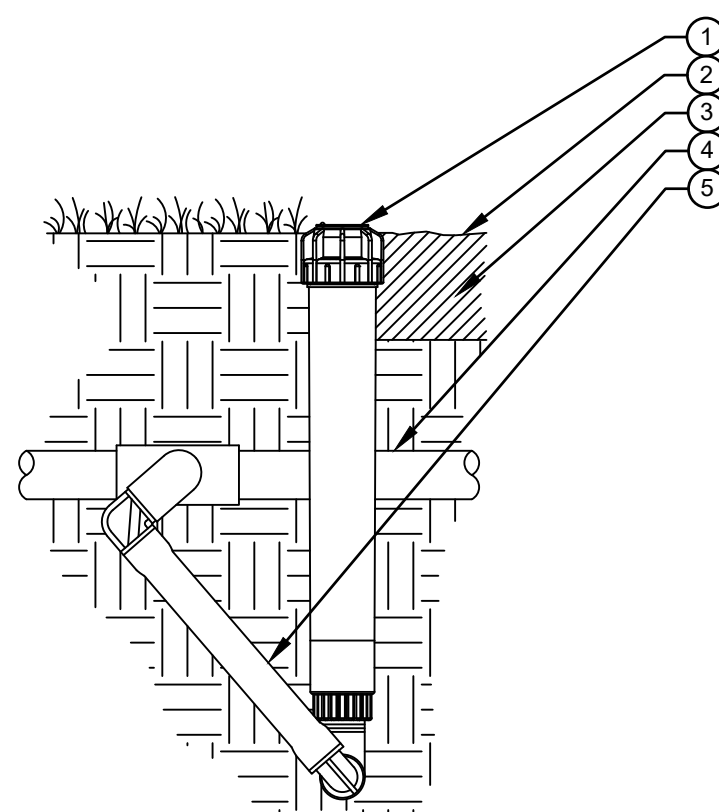
3" = 1'-0"

IR-KH-04



J DRIP AIR RELIEF VALVE

N.T.S.



K ECO-INDICATOR ON SWING JOINT

N.T.S.

- LEGEND:
- ECO INDICATOR
 - FINISHED GRADE
 - ADJACENT MULCH
 - PVC LATERAL PIPE
 - SWING JOINT

ENGINEER OF WORK:

Kimley»Horn Kimley-Horn and Associates, Inc. ©2023
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RANDALL KOPFF P.L.A. 6633



10-11-2023
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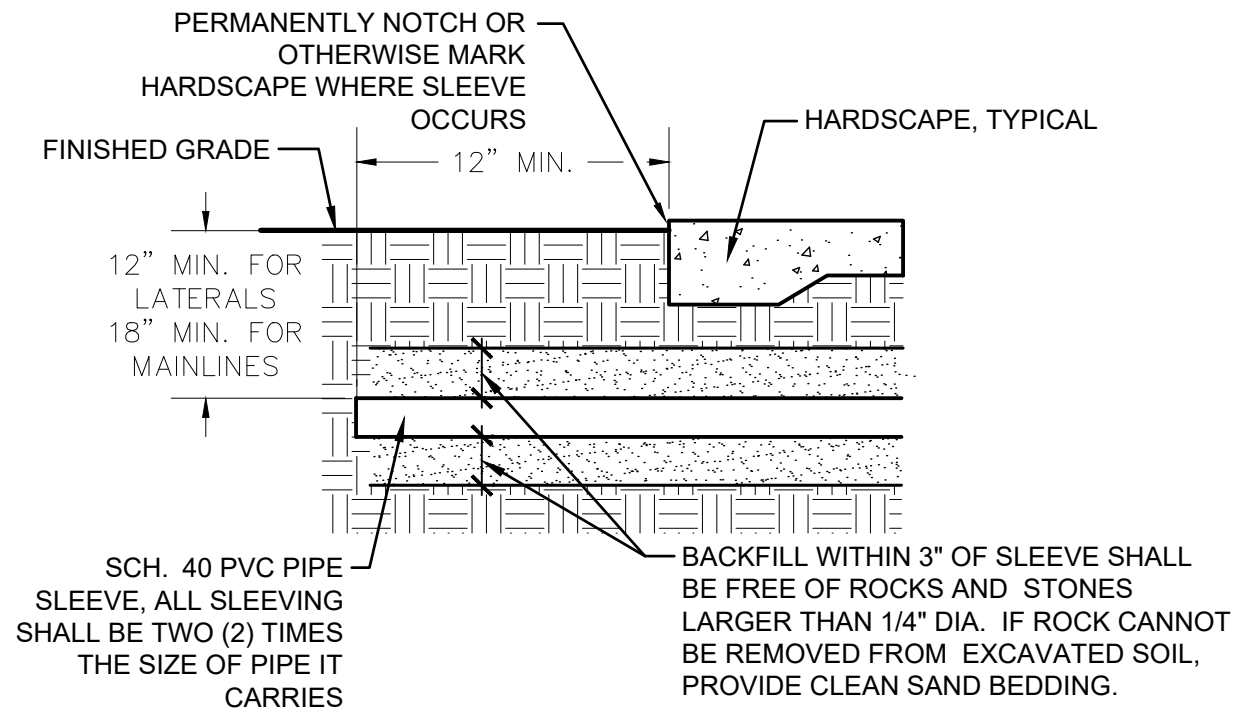
10TH STREETSCAPE IMPROVEMENTS PROJECT IRRIGATION DETAILS

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 19 OF 22 SHEETS

W.O. NO. CIP S22-107

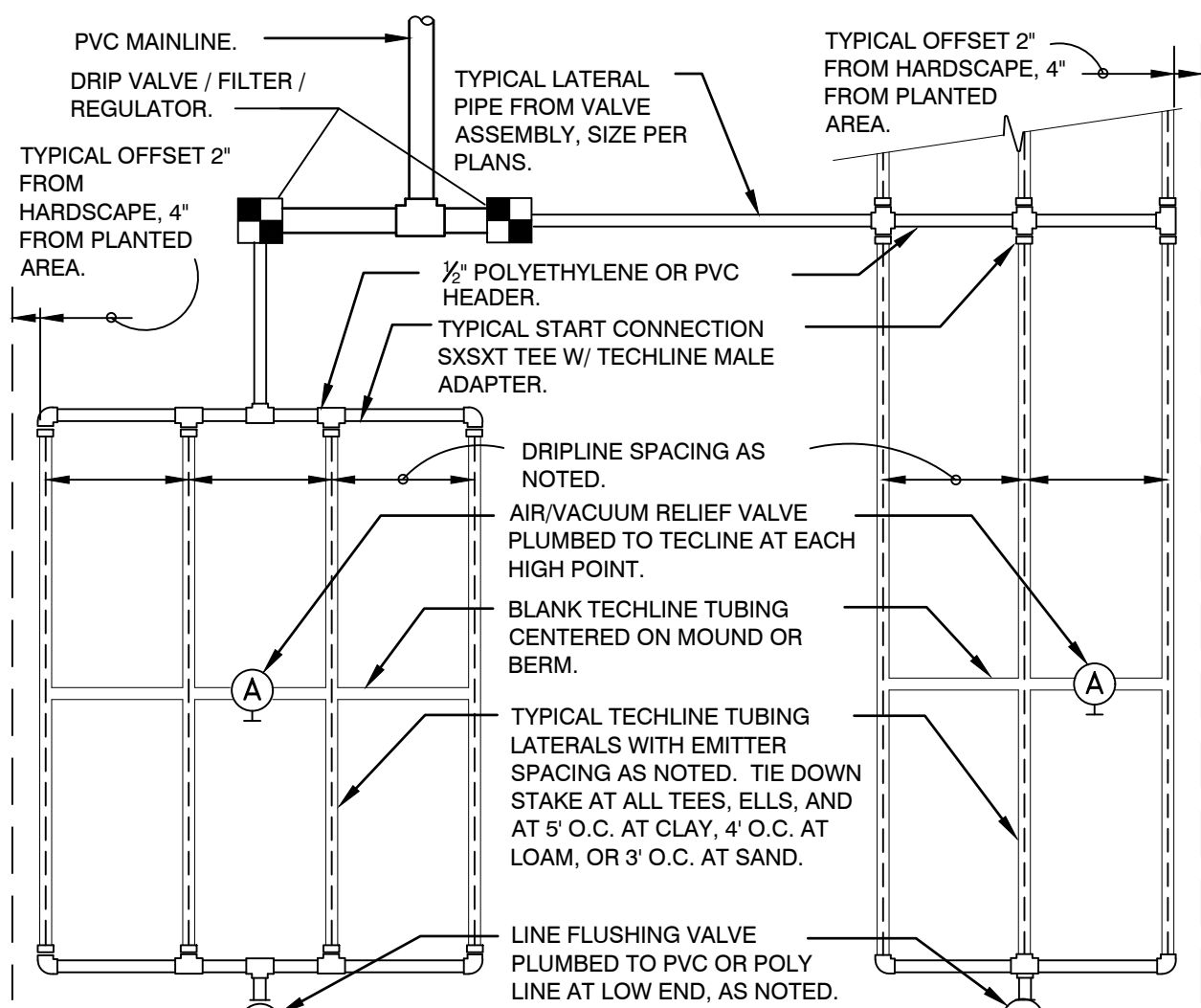
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BID SET PLANS - NOT FOR CONSTRUCTION



L PIPE SLEEVE

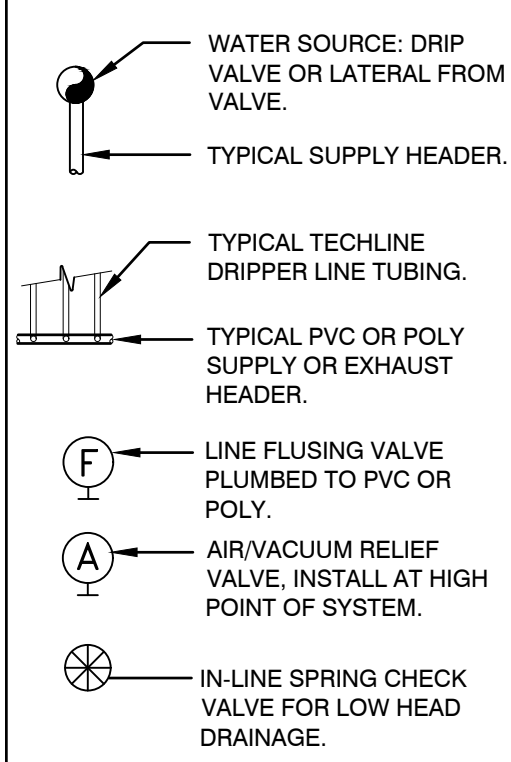
N.T.S.



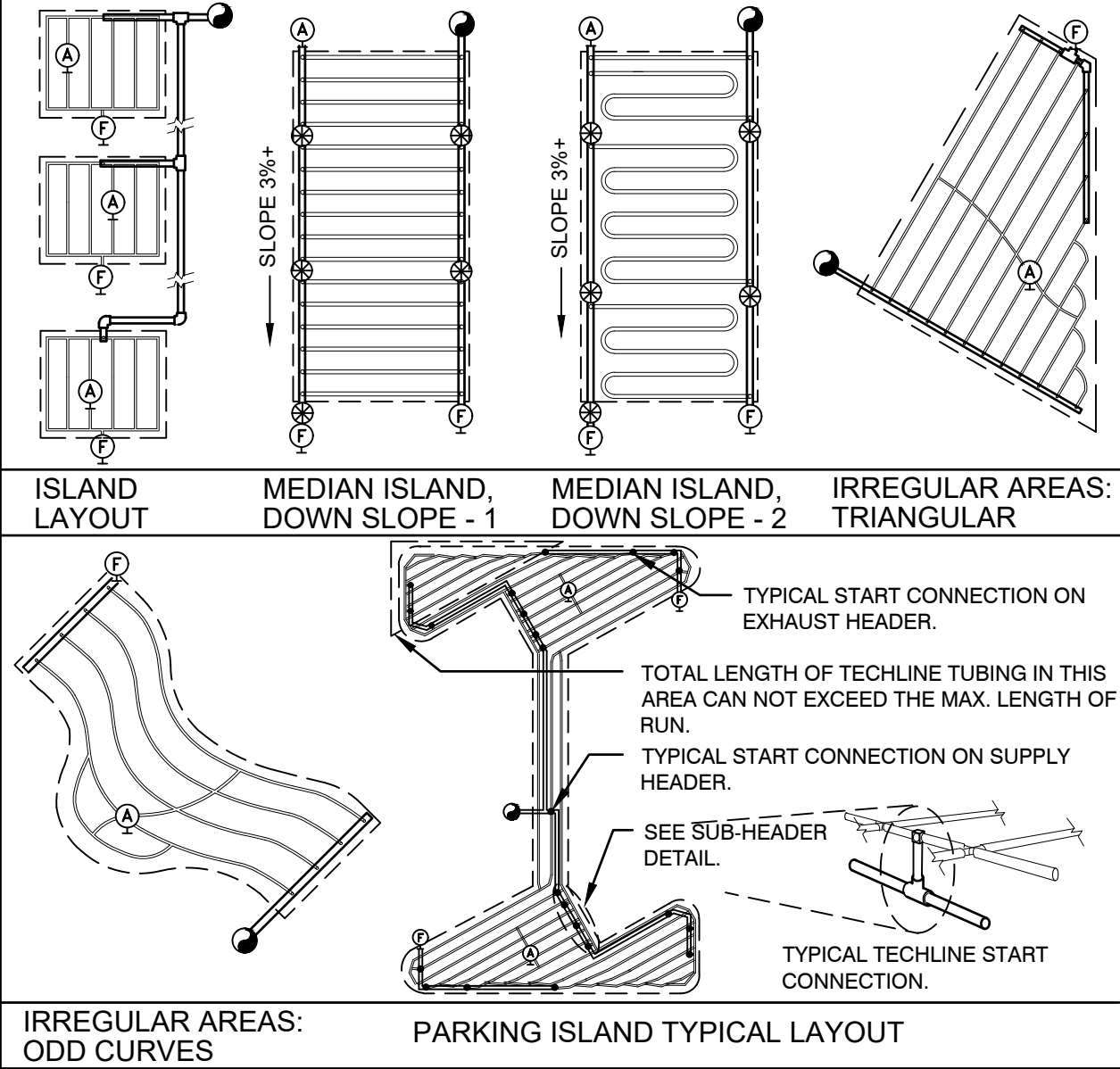
M TYPICAL NETAFIM TECHLINE REQUIREMENTS

- SLOPED CONDITION NOTES:
1. DRIPLINE LATERALS SHOULD FOLLOW THE CONTOURS OF THE SLOPE WHENEVER POSSIBLE.
 2. INSTALL AIR RELIEF VALVE AT HIGHEST POINT.
 3. TECHLINE NORMAL SPACING WITHIN THE TOP 1/2 OF SLOPE.
 4. INSTALL TECHLINE AT NORMAL SPACING PLUS 25% AT THE BOTTOM 1/2 OF THE SLOPE.
 5. WHEN ELEVATION CHANGE IS 10 FT OR MORE, ZONE THE BOTTOM 1/2 ON A SEPARATE VALVE.

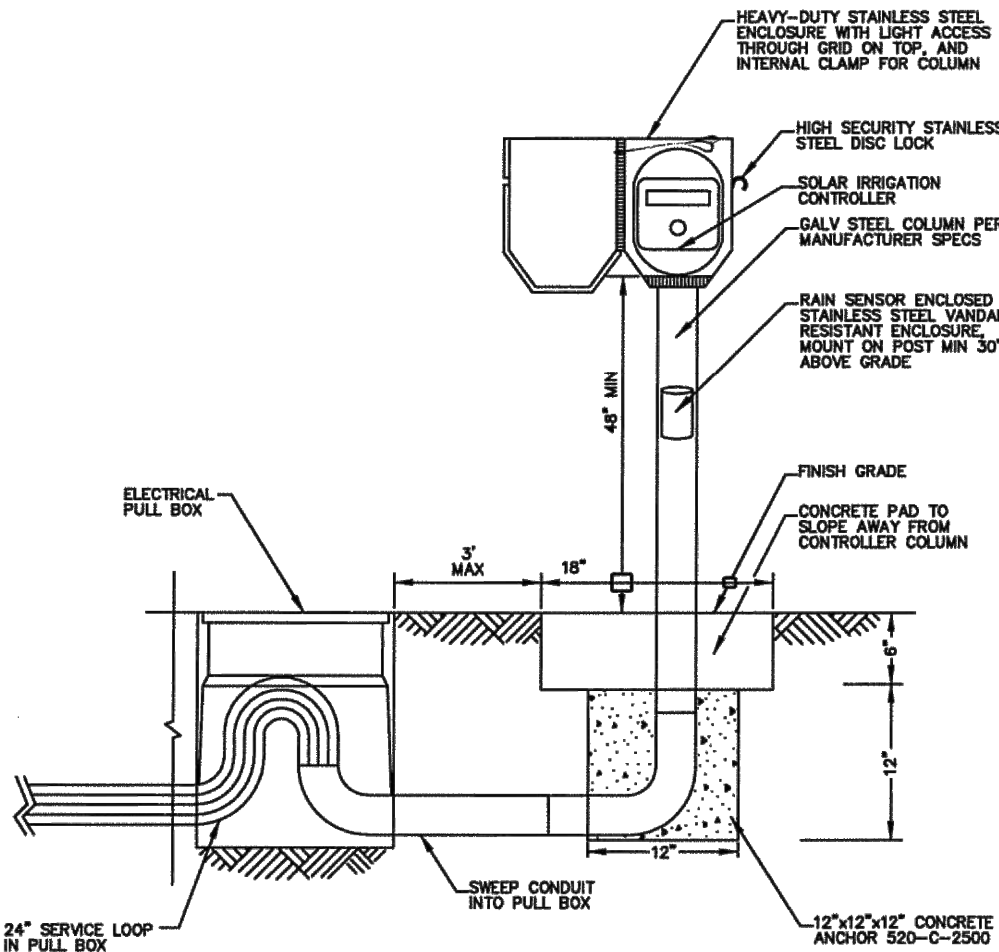
TECHLINE MAXIMUM LENGTH OF SINGLE LATERAL (FEET)										
DRIPPER SPACING			12"			18"			24"	
DRIPPER FLOW RATE (GPH)			0.4	0.6	0.9	0.4	0.6	0.9	0.6	0.9
	INLET PRESSURE (PSI)	15	292	233	175	410	322	247	405	308
		25	397	321	238	558	438	335	553	423
		35	486	365	279	656	514	394	649	497
		45	520	407	311	732	574	439	725	555
TECHLINE FLOW PER 100 FEET										
DRIPPER SPACING	0.4 GPH DRIPPER			0.6 GPH DRIPPER			0.9 GPH DRIPPER			
	GPH	GPM		GPH	GPM		GPH	GPM		
12"	40.00	0.67		61.00	1.02		92.00	1.53		
18"	26.67	0.44		41.00	0.68		61.00	1.02		
24"	N/A	N/A		31.00	0.51		46.00	0.77		



EXAMPLES LEGEND



N.T.S.



- NOTES:
1. PROVIDE SOLENOID ADAPTOR TO SUPPORT SOLAR CLOCK FUNCTION ON VALVE.
 2. MAXIMUM RUN OF CONTROL WIRE TO REMOTE CONTROL VALVE (RCV) IS 1500' UNLESS OTHERWISE SPECIFIED.
 3. SEAL CONDUIT OPENINGS WITH ELECTRICAL SEALANT.

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING		RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE	
ORIGINAL	KA	T. Stanton	10/11				
Update	KA	N. Botta	11/11				
Reviewed	KA	N. Botta	10/15				
				SOLAR IRRIGATION CONTROLLER		DRAWING NUMBER I-19	

N IRRIGATION CONTROLLER

N.T.S.

ENGINEER OF WORK:

Kimley»Horn Kimley-Horn and Associates, Inc. ©2023
401 B Street, Suite 600, San Diego, California 92101
Phone: 619.234.9411 / www.kimley-horn.com

RANDALL KOPFF P.L.A. 6633



10-11-2023
DATE

10TH STREETSCAPE IMPROVEMENTS PROJECT IRRIGATION DETAILS

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 20 OF 22 SHEETS

W.O. NO. CIP S22-107

FOR CITY ENGINEER				DATE	DIVISION HEAD
DESCRIPTION	BY	APPROVED	DATE	FILMED	
ORIGINAL	KH				DESIGN ENGINEER
					NAD 83 COORDINATES
					LAMBERT COORDINATES
CONTRACTOR				DATE STARTED	S22-107- 20-D
INSPECTOR				DATE COMPLETED	

ELECTRICAL GENERAL NOTES

1. THE DRAWINGS INDICATE ARRANGEMENTS AND APPROXIMATE SIZES AND RELATIVE LOCATIONS OF PRINCIPAL APPARATUS, EQUIPMENT, DEVICES, AND SERVICES TO BE PROVIDED. DRAWINGS ARE DIAGRAMMATIC AND ARE A GRAPHIC REPRESENTATION OF CONTRACT REQUIREMENTS BASED ON THE INFORMATION PROVIDED BY THE MANUFACTURER IDENTIFIED IN THE EQUIPMENT SCHEDULE AT THE SCALE INDICATED.

2. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE OWNER WITH (1) COMPLETE BOUND COPY OF ALL OWNER APPROVED SUBMITTALS AND ALL OPERATION AND MAINTENANCE MANUALS

4. CODES AND STANDARDS: ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS AND FIRE INSURANCE CARRIER'S REQUIREMENTS.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO
- RESTORE ALL PROPERTY, LANDSCAPING, PAVING AND DRIVEWAYS THAT ARE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION.

6. HOLES, CAVITIES, TRENCHES, AND DEPRESSIONS RESULTING FROM THE REMOVAL OF STRUCTURES OR OBSTRUCTIONS, EXCEPT IN AREAS TO BE EXCAVATED, SHALL BE BACKFILLED WITH SUITABLE MATERIAL WHICH SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698, D-2922 AND D-3017. SURPLUS EXCAVATION MATERIALS SHALL BE LEGALLY DISPOSED OF BY THE CONTRACTOR.

LEGEND

- CONSTRUCTION NOTE

PROPOSED SOLAR LIGHT POLE SEE LIGHTING LEGEND FOR FURTHER INFORMATION

EXISTING STREET LIGHT FIXTURE AND MAST ARM MOUNTED ON UTILITY POLE
- The main site plan illustrates a street layout with various improvements. Key features include:
- **Streets and Sidewalks:** Labeled streets include 'W 6" WATER CAL AM' and 'OHE'. Annotations specify 'EXISTING PEDESTRIAN SIDE WALK (TYP.)' and 'PROPOSED DRIVE WAY (TYP.)'.
- **Utility and Infrastructure:** Shows 'EXISTING WATER LINE (TYP.)', 'EXISTING DRIVE WAY (TYP.)', 'EXISTING STREET LIGHT FIXTURE AND MAST ARM MOUNTED TO THE UTILITY POLE (TYP.)', and 'EXISTING UTILITY POLE (TYP.)'.
- **Property and APNs:** Various parcels are identified with APNs: 626-291-01, 626-291-15, 626-291-04, 626-291-05, 626-291-06, 626-291-07, 626-282-21, 626-282-20, 626-282-19, 626-282-26, 626-282-25, 626-282-15, 626-282-14, 626-282-13, and 626-282-12.
- **Other Labels:** Includes 'R/W (TYP.)', 'JAX FIRE PIT GRILL', 'SOPHISTICATED AUTO REPAIR', 'VACANT LOT', 'SOUTH BAY BEHAVIORAL HEALTH CENTER', 'CALI GLASS & WINDOWS', and 'CALIFORNIA ALUMINUM & VINYL'.
- **Dimensions and Notes:** Numerous numerical dimensions are provided along the street and sidewalk segments. A note points to a specific location: '(TYP.) ①'.
- CONSTRUCTION NOTES
- ① FURNISH AND INSTALL (1) NEW LIGMAN LIGHTING SOLAR LIGHTING FIXTURE AND POLE MODEL #USOL-20011-UHAM-20021-SO-20-T2-30. POLE SHALL BE 16.8' CONFIGURATION WITH FURNISHED BASE PLATE. UNDERGROUND FOUNDATION AND ANCHORING TO BE PROVIDED BY CONTRACTOR PER TYPE 15 CALTRANS STANDARD PLAN ES-6A AND ES-7N, BASE PLATE AND ANCHOR BOLTING PER MANUFACTURER SPECIFICATIONS. CONTRACTOR SHALL SUBMIT UNDERGROUND FOUNDATION AND ANCHORING SHOP DRAWINGS PRIOR TO CONSTRUCTION. SEE SOLAR LIGHT POLE FOUNDATION EXHIBIT ON SHEET 22 FOR REFERENCE.
- LIGHTING LEGEND
- | SYMBOL | QTY | TYPE | DESCRIPTION | MOUNTING TYPE | WATTAGE | MOUNTING HEIGHT | DESCRIPTION |
|-----------------------------------|-----|-----------------------|---|---------------|---------|-----------------|-------------|
| <div><div></div><div></div></div> | 11 | SOLAR AREA LIGHT POLE | PROPOSED LIGMAN LIGHTING, 5738 LUMEN, TYPE 2 LUMINAIRE MODEL #USOL-20011-UHAM-20021-SO-20-T2-30 | POLE MOUNTED | 20 | 18 FT | SINGLE |
- DESIGN CRITERIA*
- PEDESTRIAN WALKWAY

ILLUMINANCE (Fc)

AVERAGE = 0.5

AVG/MIN = 5:1
- *PERIESNA LIGHTING HANDBOOK 10TH EDITION, TABLE 11-2 RECOMMENDED DESIGN CRITERIA FOR WALKWAYS WITHIN PUBLIC ROAD RIGHT OF WAY
- CALCULATION SUMMARY
- PEDESTRIAN WALKWAY WEST

ILLUMINANCE (Fc)

AVERAGE = 1.12

AVG/MIN = 3.73
- PEDESTRIAN WALKWAY EAST

ILLUMINANCE (Fc)

AVERAGE = 1.31

AVG/MIN = 4.37
- A north arrow pointing upwards and a graphic scale bar indicating distances of 0, 10, 20, and 40 feet.
- ENGINEER OF WORK:
- Kimley»Horn** Kimley-Horn and Associates, Inc. ©2023
401 B Street, Suite 600, San Diego, California 92101
Phone: 619.234.9411 / www.kimley-horn.com
- Pete Syntax*
PETE SYNTAX R.C.E. 20371
- A circular professional engineer seal for Peter Syntax, No. E 20371, State of California, Electrical, with an expiration date of 06/30/25.
- 10-09-2023
DATE
- 10TH STREETSCAPE IMPROVEMENTS PROJECT
ELECTRICAL & PHOTOMETRIC
SITE PLAN
- CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 21 OF 22 SHEETS
- W.O. NO. CIP S22-107
- | FOR CITY ENGINEER | | DATE | | | DIVISION HEAD |
|-------------------|----|----------|------|--------|---------------------|
| DESCRIPTION | BY | APPROVED | DATE | FILMED | DESIGN ENGINEER |
| ORIGINAL | KH | | | | |
| | | | | | NAD 83 COORDINATES |
| | | | | | LAMBERT COORDINATES |
- CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____
- S22-107- 21-D**
- Plotted By: Thomson, Jared Sheet Set:Kha Layout:LIGHTING AND ELECTRICAL PLAN October 09, 2023 03:17:55pm \\Sndfp01\cnc_snd\195243012 - 10th Streetscape Improvements\Design\Plan Sheets\243012-PH.dwg
- BID SET PLANS - NOT FOR CONSTRUCTION

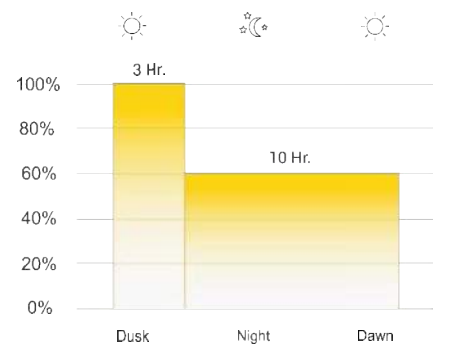
USOL-20011
Solar PV Pole 2 • Vertically Integrated Solar Panels

Ligman
LIGHTING USA

Powder coated galvanized steel light column clad with hexagonal vertical solar PV panels
Pole & luminaire features

- Solar modules consist of monocrystalline high-efficiency photovoltaic cells
- Lithium Iron Phosphate (LiFePO4) battery
- Dimming range 0-100%
- Different dimming scenarios are available: Step dimming, Dusk to dawn, Five-stage night mode, Custom hours
- Optional integrated temperature & motion sensors
- Remote solar charger programmer can be ordered as an accessory

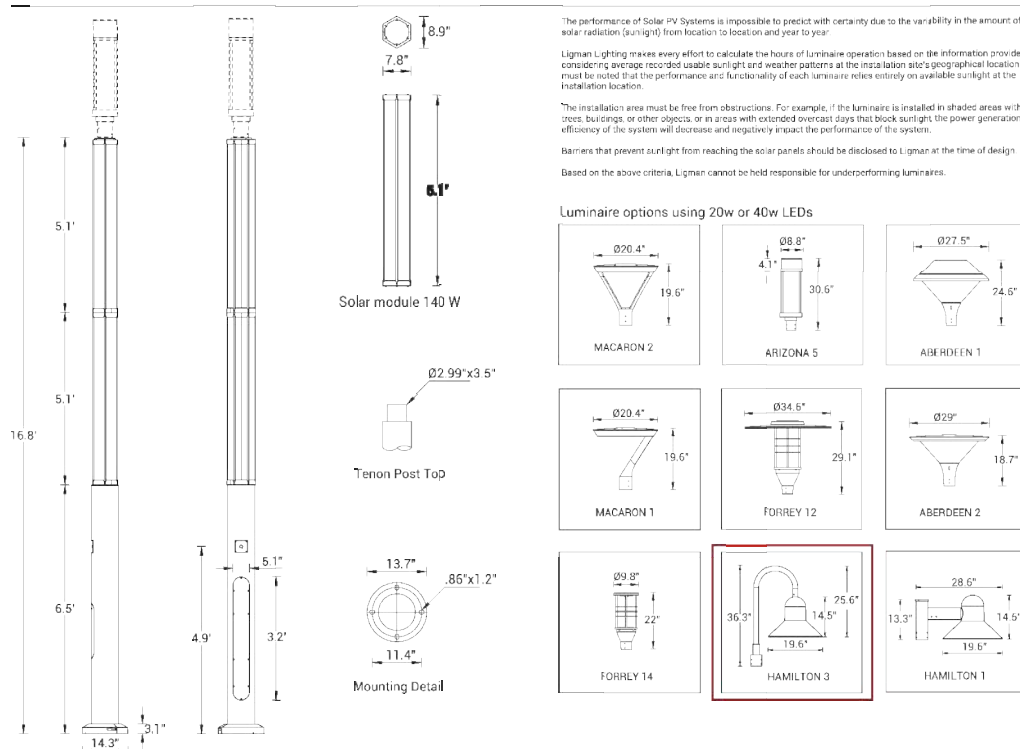
Product code	System	Solar module power	Battery	20w Luminaire	30w Luminaire	40w Luminaire	50w Luminaire	60w Luminaire
USOL-20011	200w	2x140 W	24.5 kWh	12.0h	17.0h	6.1h	8.8h	-



Time & dimming settings are set with the remote solar charger programmer

Solar module power	2x140 W
Battery	12V 24.5kWh
Pole Diameter	Ø8.5"
Luminaires operating 100 %	20 W (12-13 hours)
Finish	2.095"
Steel Pole Wall Thickness	.15"
Height	16.8'
Assembled Weight	375 lbs

Standard: 2 stage step-dimming, occupancy dimming and sensor.



USOL-20011
Solar PV Pole 2 • Vertically Integrated Solar Panels

Ligman
LIGHTING USA

Seamless vertical solar PV module integration

Seamless vertical integration is a clean efficient method to integrate solar photovoltaic technology into column lighting systems. Using this method, large flat solar panels are not fixed on top of the lighting column or system, but instead are placed around the lighting pole itself. This seamlessly integrates the technology aesthetically without compromising the efficiency, adding value to both designers and end users.

Vertical integration is more wind-resistant, reducing wind-loads and minimising the need for more expensive pole foundations. It also provides a reduced maintenance burden with the reduction of dirt build up on the photovoltaic surfaces requiring both less frequent and easier cleaning. The vertical wrap-around panels receive light more evenly and efficiently from the sun and sky during the course of daylight hours, even in darker climates and seasons.

360° Full day charging
6 slim solar sections are fixed tightly onto a hexagon frame which ensures 50% of solar panel will face sunshine at any time of the day no onsite orientation is needed.

Modular installation
The cylindrical solar PV module is based on modular design concept for easy installation and maintenance.

Patented design
The cylindrical solar PV module is designed based on advanced concepts and manufactured to high standards. PCT pre-registration was processed in 180 countries to protect key markets.

Design aesthetics
The module system is the real answer to design aesthetics, providing a compact and fully integrated green energy solution to the pole.

Hidden compartment for batteries

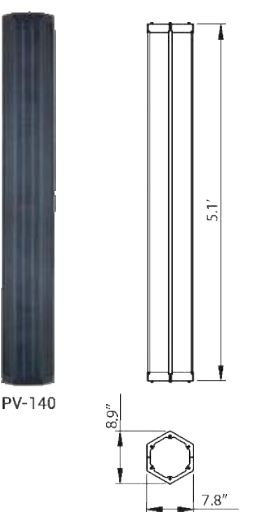
The pole is supplied with a compartment and shelving to facilitate the installation of batteries and controller.

To simplify installation and maintenance the controller and batteries are installed in the base section of the pole and are hidden with a flush-mounted cover that follows the contour of the pole and secured with tamper-proof screws.

Strong wind resistance
The cylindrical design reduces the wind load area and each module is directly fastened to the pole by 12 screws for better wind resistance. Ideal for very windy regions.

Anti snow covering
Cylindrical solar PV modules are mounted vertically, preventing build up of snow and dirt. This ensures that enough power can be generated even in very snowy climates.

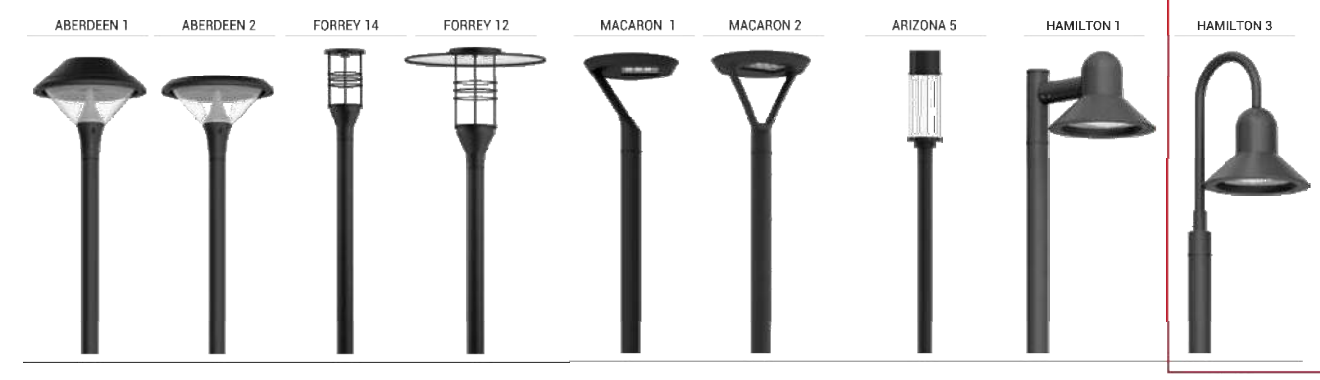
Easy to clean
Less dust will fall on the surface than on a regular solar panel. Maintenance workers can clean it easily standing on the ground with an extending low pressure hose brush or spray cleaner. This results in higher work efficiency and reduced maintenance cost.



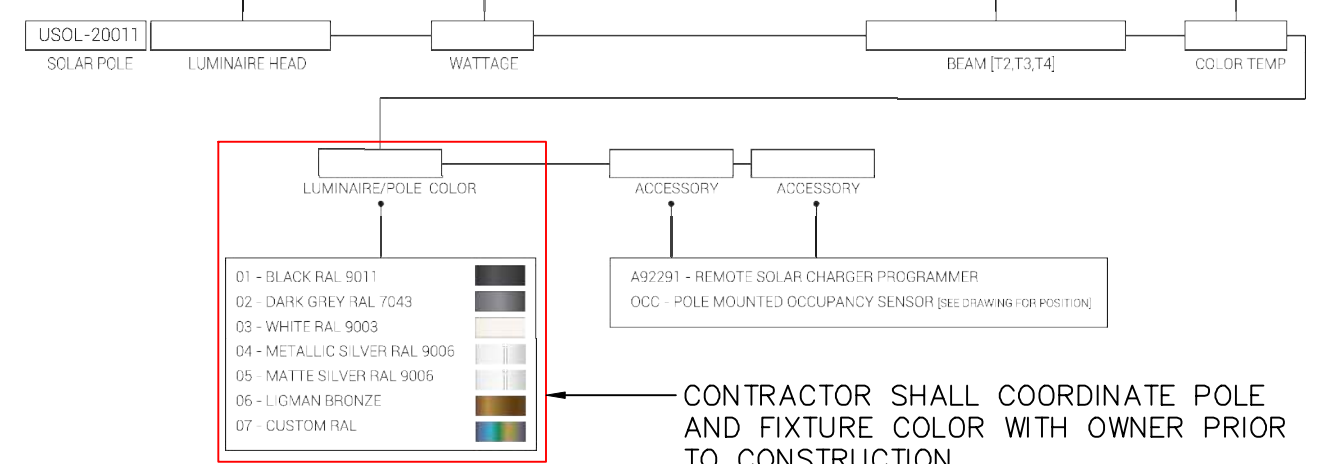
Model number	PV-140
Maximum power	140 W
Maximum power voltage	18V 36V
Maximum power current	7.78A 3.89A
Cell type	Monocrystalline
Material	Aluminum + Tempered glass
International protection standard rate	IP65
Solar cell efficiency	>20.5%
Operating temperature	-40°C ~ +80°C
Rated life-time	>20 years
Weight	61.5 lbs
Warranty	5 Years
Solar array & Ligman manufactured product	
Charge Controller	2000 Cycles 5 year back-to-back manufacture warranty
Battery (Made in USA)	

USOL-20011
Solar PV Pole 2 • Vertically Integrated Solar Panels

Ligman
LIGHTING USA



Post top luminaires				T2		T4			
ABERDEEN 1	UABA-20001-SO-20	24_LED 20W	2738lm	A++	25.3 lb	142°x99°	142°x72°	102°x63°	W27130149
	UABA-20001-SO-40	24_LED 40W	5477lm	A++	25.3 lb	142°x99°	142°x72°	102°x63°	W27130149
	UABA-20011-SO-40	24_LED 40W	5477lm	A++	23.1 lb	142°x99°	127°x72°	102°x63°	W27130140
ABERDEEN 2	UABA-20011-SO-20	24_LED 20W	5477lm	A++	23.1 lb	142°x99°	142°x72°	102°x63°	W27130140
	UFOR-20022-SO-20	1 000 20W	1907lm	A++	29.7 lb	140°x100°	132°x103°	127°x117°	W27130140
	UFOR-20022-SO-40	1 000 40W	3814lm	A++	29.7 lb	140°x100°	132°x103°	127°x117°	W27130140
FORREY 14	UFOR-20042-SO-20	1 000 20W	1907lm	A++	37.4 lb	140°x100°	132°x103°	127°x117°	W27130140
	UFOR-20042-SO-40	1 000 40W	3814lm	A++	37.4 lb	140°x100°	132°x103°	127°x117°	W27130140
	UMC-20002-SO-20	24_LED 20W	2550lm	A++	29.7 lb	136°x51°	119°x86°	102°x73°	W27130140
MACARON 1	UMC-20002-SO-40	24_LED 40W	5100lm	A++	29.7 lb	136°x51°	119°x86°	102°x73°	W27130140
	UMC-20012-SO-20	24_LED 20W	2550lm	A++	29.7 lb	136°x51°	119°x86°	102°x73°	W27130140
	UMC-20012-SO-40	24_LED 40W	5100lm	A++	29.7 lb	136°x51°	119°x86°	102°x73°	W27130140
MACARON 2	UMC-20002-SO-20	24_LED 20W	2550lm	A++	29.7 lb	136°x51°	119°x86°	102°x73°	W27130140
	UMC-20002-SO-40	24_LED 40W	5100lm	A++	29.7 lb	136°x51°	119°x86°	102°x73°	W27130140
	UAR-21052-SO-20	16_LED 20W	2101lm	A++	17.8 lb	142°x52°	137°x65°	105°x70°	W27130140
ARIZONA 5	UAR-21052-SO-40	16_LED 40W	4201lm	A++	17.8 lb	142°x52°	137°x65°	105°x70°	W27130140
	UHAM-20011-SO-20	24_LED 20W	2965lm	A++	31 lb	137°x54°	120°x94°	105°x70°	W27130140
	UHAM-20011-SO-40	24_LED 40W	5795lm	A++	31 lb	137°x54°	120°x94°	105°x70°	W27130140
HAMILTON 1	UHAM-20021-SO-20	24_LED 20W	2965lm	A++	31 lb	137°x54°	120°x94°	105°x70°	W27130140
	UHAM-20021-SO-40	24_LED 40W	5795lm	A++	31 lb	137°x54°	120°x94°	105°x70°	W27130140



The solar calculations done by Ligman for project locations are subject to approval and have been made with information provided by others at time of request. Ligman Lighting USA cannot be held responsible for product performance based on inaccurate weather data or incorrect location data. These include, but are not limited to, weather data, location data, and any other information that may affect the performance of this product.

LIGMANUSA.COM | 503.645.0500

6.3.21

USOL-20011
Solar PV Pole 2 • Vertically Integrated Solar Panels

Ligman
LIGHTING USA

Lithium Iron phosphate (LiFePO4) battery

- Using lithium iron phosphate cell technology, superior safety
- Thousands of cycles, 100% DOD, under normal conditions.
- Built-in automatic protection for over-charge, over discharge, over current and over temperature.
- Free of maintenance
- Internal cell balancing
- Lighter weight: About 40% ~ 50% of the weight of a comparable lead acid battery
- Wider temperature range: -20°F ~ 120°F

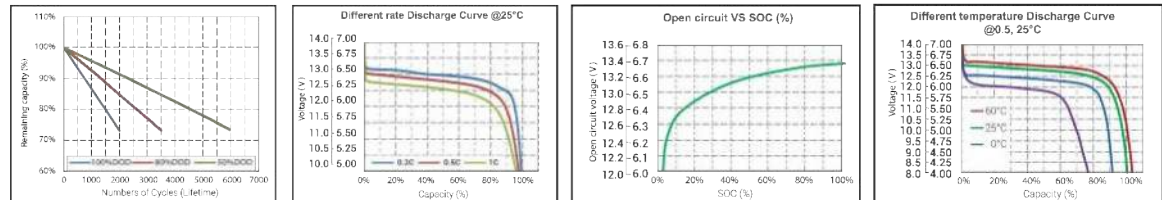


General specifications

Size	7.12" x 3.03" x 6.57"
Weight	6.4lbs
Voltage & Capacity	12 V 23 Ah 276 Wh
Storage Capacity	23 Ampere Hours
Terminals	F12 Terminals, Bolt Size - M5
Lifespan/Lifecycle	Up to 90% capacity for 2,000 cycles in recommended conditions.
Operating Temperature	-20°F min, +120°F max environmental operating temps. Avoid below 32°F
Discharge	24 A max continuous 60 A max 10-second pulse 9.0 V max discharge 11.0 V max recommended discharge
Charge	15 A max
Safe & Reliable	Includes active BMS protection circuit that handles cell balancing, low voltage cutoff, high voltage cutoff, short circuit protection and temperature protection for increased performance and longer life.

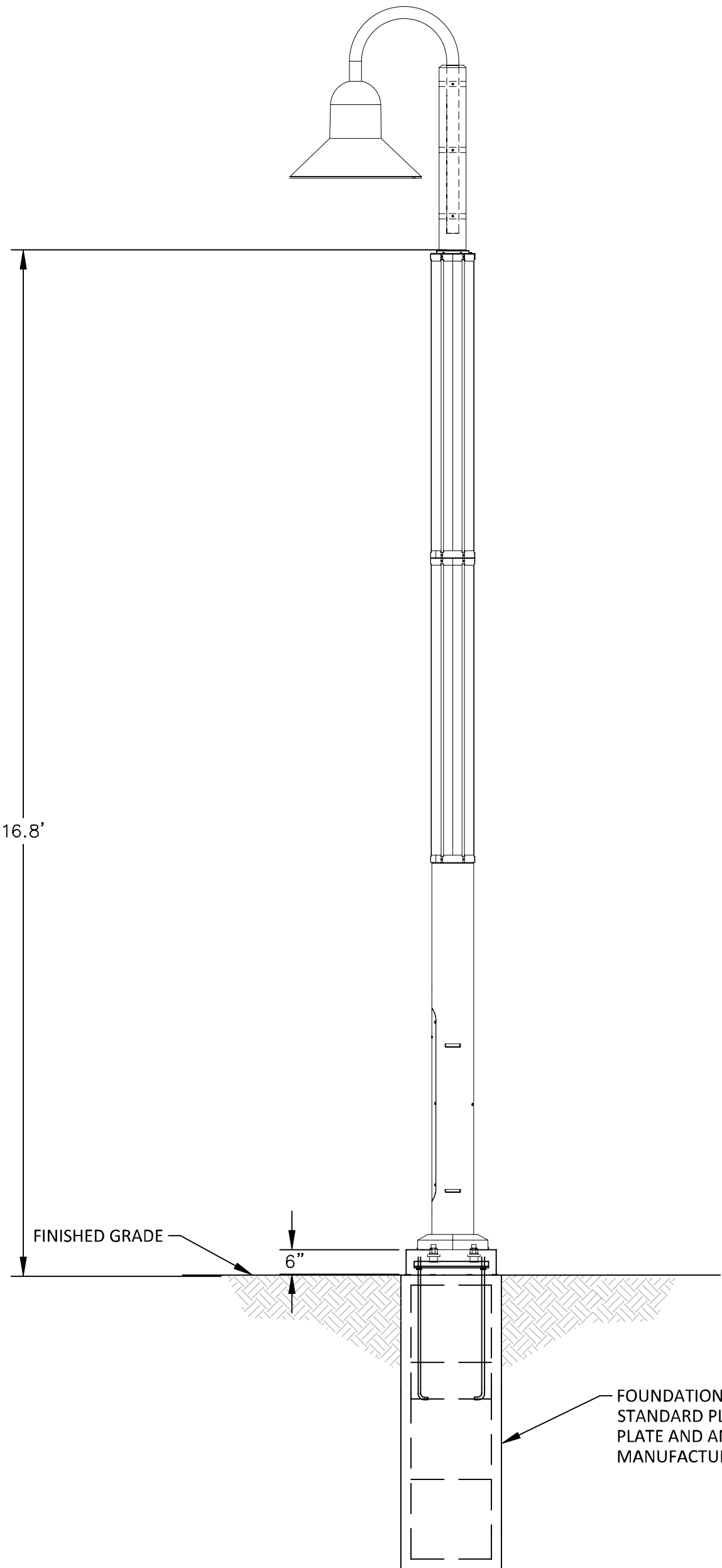
Test performance of LiFe PO4 batteries

Different depth of discharge (DOD) discharge cycle life curve @ 25 °C (77 °F)



SOLAR LIGHT POLE AND FIXTURE CUTSHEETS

SOLAR LIGHT POLE FOUNDATION EXHIBIT



10TH STREETSCAPE IMPROVEMENTS PROJECT
LIGHTING CUTSHEETS

CITY OF IMPERIAL BEACH, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 22 OF 22 SHEETS

W.O. NO. CIP S22-107

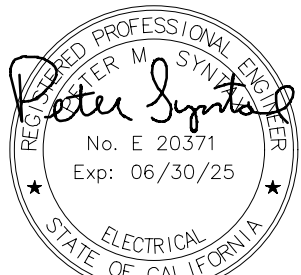
FOR CITY ENGINEER		DATE		DIVISION HEAD	
DESCRIPTION	BY	APPROVED	DATE	FILMED	DESIGN ENGINEER
ORIGINAL	KH				
					NAD 83 COORDINATES
					LAMBERT COORDINATES
CONTRACTOR INSPECTOR		DATE STARTED	DATE COMPLETED		S22-107- 22-D

ENGINEER OF WORK:

Kimley»Horn Kimley-Horn and Associates, Inc. ©2023
401 B Street, Suite 600, San Diego, California 92101
Phone: 619.234.9411 / www.kimley-horn.com

Pete Syntax
PETE SYNTAX

R.C.E. 20371



10-09-2023
DATE