COUNTY OF VENTURA
PUBLIC WORKS AGENCY

GENERAL GRADING NOTES:

1. GRADING ACTIVITIES SHALL BE IN ACCORDANCE WITH THE SOILS REPORT BY EARTH SYSTEMS PACIFIC, DATED JUNE 17, 2019 OR THERE AFTER AND WITH THE GRADING PLANS PREPARED BY JENSEN DESIGN AND SURVEY DATED OCT. 10, 2019 OR THERE AFTER.
2. THE GRADING PERMIT AND WORK SHOWN IN THESE PLANS IS VALID ONLY TO THE EXTENT OF THE VENTURA COUNTY BUILDING CODE APPENDIX J - GRADING. PERMITS OR PERMISSIONS THAT MAY BE REQUIRED BY OTHER REGULATORY AGENCIES OR INTERESTED PARTIES ARE THE RESPONSIBILITY OF THE PERMITTEE.
3. A PRECONSTRUCTION MEETING SHALL BE HELD AT THE SITE PRIOR TO ANY GRADING ACTIVITY OR LAND DISTURBANCES WITH THE FOLLOWING PARTIES PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, OTHER JURISDICTIONAL AGENCIES WHEN REQUIRED.
4. HEAVY EQUIPMENT NOISE & TRUCK DELIVERIES SHALL OCCUR DURING HOURS SPECIFIED BY THE ARCHITECT.
5. NO GRADING ACTIVITY SHALL OCCUR IN ANY WETLAND, BLUE-LINE STREAM, RED-LINE CHANNEL, OR FLOODPLAIN WITHOUT THE PERMISSION OF THE ARCHITECT, OR OTHER AUTHORITIES HAVING JURISDICTION.
6. ALL RECOMMENDATIONS MADE BY THE SOILS ENGINEER (AND ENGINEERING GEOLOGIST, WHERE EMPLOYED) CONTAINED IN THE REPORTS AS APPROVED BY THE COUNTY SHALL BE A PART OF THIS GRADING PLAN.
7. ALL DISTURBED SURFACES SUBJECT TO EROSION SHALL BE PROTECTED IN ACCORDANCE WITH THE VENTURA COUNTYWIDE MUNICIPAL STORMWATER NPDES PERMIT. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED FULLY FUNCTIONAL.
8. ALL UNSUITABLE MATERIAL, I.E. LUMBER, LOGS, BRUSH, COMPRESSIBLE SOILS, OR ANY ORGANIC MATERIALS OR RUBBISH, SHALL BE REMOVED AS REQUIRED BY THE SOILS ENGINEER AND ENGINEERING GEOLOGIST FROM ALL AREAS TO RECEIVE FILL.
9. ALL AREAS TO RECEIVE FILL SHALL BE INSPECTED AND APPROVED BY THE SOILS ENGINEER (AND ENGINEERING GEOLOGIST WHERE EMPLOYED) AFTER REMOVAL OF UNSUITABLE MATERIAL AND EXCAVATION OF KEYWAYS AND BENCHES, AND PRIOR TO PLACEMENT OF SUBSURFACE DRAINAGE SYSTEMS OR FILL.
10. ALL MATERIALS DEEMED UNSUITABLE FOR PLACEMENT IN COMPACTED FILL SHALL BE REMOVED FROM THE SITE. MATERIALS SUCH AS CONSTRUCTION INERT DEBRIS, OR IMPORTED MATERIALS SHALL BE APPROVED BY THE SOILS ENGINEER AND COUNTY PRIOR TO USE IN COMPACTED FILL. WHERE EXCAVATED MATERIAL IS LARGER THAN TWELVE INCHES IN LARGEST DIMENSION, IT MUST BE BROKEN INTO SMALLER PARTICLE SIZES, BEFORE BEING USED AS FILL.
11. THE SOILS ENGINEER SHALL DIRECT THE REMOVAL OF ANY EXISTING UNDERGROUND STRUCTURES SUCH AS SEPTIC TANKS, IRRIGATION LINES, ETC.
12. ANY WATER WELL LOCATED WITHIN THE AREA OF DISTURBANCE SHALL BE REPORTED TO THE WATER RESOURCES DIVISION, WATERSHED PROTECTION DISTRICT PRIOR TO ITS MODIFICATION, ABANDONMENT, OR DESTRUCTION.
13. ANY OIL WELL LOCATED WITHIN THE AREA OF DISTURBANCE SHALL BE REPORTED TO THE STATE OF CALIFORNIA, DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES PRIOR TO ITS MODIFICATION, ABANDONMENT, OR DESTRUCTION.
14. ALL TEMPORARY EXCAVATED SLOPES OR BENCHES AND KEYS FOR BUTTRESS OR STABILIZATION FILLS MUST BE EXAMINED BY THE ENGINEERING GEOLOGIST AND SOILS ENGINEER TO INSURE THAT ALL POTENTIAL PLANES OF FAILURE HAVE BEEN EXPOSED IN THE EXCAVATION AND WILL BE ADEQUATELY SUPPORTED BY THE PROPOSED BUTTRESS. FIELD CERTIFICATION MUST BE SUBMITTED BY THE CONSULTANTS PRIOR TO PLACING FILL.
15. THE SOILS ENGINEER AND ENGINEERING GEOLOGIST (WHERE EMPLOYED) SHALL PROVIDE RECOMMENDATIONS AND APPROVE CORRECTIVE WORK TO INSURE SLOPE STABILITY WHERE UNSTABLE MATERIAL IS EXPOSED AT THE TOP OF CUTS AND EXCAVATIONS.
16. INTERIM SOILS AND GEOLOGIC REPORTS SHALL BE SUBMITTED TO THE COUNTY AS REQUIRED BY THE ARCHITECT.
17. ROUGH GRADE SOILS ENGINEERING AND (IF APPLICABLE) ENGINEERING GEOLOGY REPORTS SUMMARIZING ALL EARTHWORK PERFORMED AND CONCLUDING THAT THE WORK HAS BEEN COMPLETED ACCORDING TO THE APPROVED REPORTS SHALL BE SUBMITTED TO THE COUNTY FOR APPROVAL OF THE ROUGH GRADING BY THE CIVIL ENGINEER, SOILS ENGINEER, AND ARCHITECT PRIOR TO CALLING FOR BUILDING AND SAFETY INSPECTION.
18. FINAL SOILS ENGINEERING AND (IF APPLICABLE) ENGINEERING GEOLOGY REPORTS SUMMARIZING ALL EARTHWORK PERFORMED SINCE ROUGH GRADING AND CONCLUDING THAT THE WORK HAS BEEN COMPLETED ACCORDING TO THE APPROVED REPORTS SHALL BE SUBMITTED WITH THE AS-BUILT PLANS (RECORD DRAWING) TO THE CIVIL ENGINEER AND ARCHITECT PRIOR TO FINAL INSPECTION BY THE ARCHITECT.

EARTHWORK QUANTITIES

CUT: 13750 CU. YDS. EXPORT: 0 CU. YDS. DISPOSAL SITE LOST TO SHRINKAGE

FILL: 16500 CU. YDS IMPORT: 0 CU. YDS SOURCE ON SITE

THIS PROJECT INCLUDES POST CONSTRUCTION BMP'S _____ YES _____ NO

THE TOTAL ESTIMATED DISTURBED AREA OF GRADING AND CONSTRUCTION IS 2.5 ACRES. PROJECTS THAT ARE 1.0 ACRE OR GREATER IN DISTURBED AREA WILL REQUIRE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND NOTICE OF INTENT (NOI) AS APPROVED BY THE STATE REGIONAL WATER QUALITY CONTROL BOARD AS DESCRIBED ABOVE.

AVERAGE NATURAL SLOPE IN THE AREA OF GRADING 3 %

THE TOTAL AMOUNT OF IMPERVIOUS AREA TO BE CONSTRUCTED AS PART OF THIS PROJECT IS _____SQ. FT.

TOTAL PROPOSED LANDSCAPED AREA _____ SQ. FT. TOTAL NATIVE PLANTING LANDSCAPE AREA _____ % (PERCENT OF TOTAL LANDSCAPE AREA)

LAND DEVELOPMENT & INSPECTION SERVICES MUST BE NOTIFIED TEN (10) WORKING DAYS PRIOR TO ANY EXPORT/IMPORT TO/FROM THE PROJECT SITE.

PERMITS

COUNTY ENCROACHMENT PERMIT NO.	VENTURA COUNTY WATERSHED PROTECTION DISTRICT WATERCOURSE PERMIT NO.
_____ DATE _____	_____ DATE _____
STATE ENCROACHMENT PERMIT NO.	**FLOODPLAIN DEVELOPMENT PERMIT**
_____ DATE _____	_____ DATE _____

ENGINEERED GRADING INSPECTION CERTIFICATES

JOB ADDRESS OR LOT AND TRACT NO: OXNARD COLLEGE FIRE ACADEMY, CAMARILLO, CA.
104 DURLEY AVE, CAMARILLO, CA

ROUGH GRADING CERTIFICATION

(A) BY SOILS ENGINEER

I CERTIFY THAT THE ROUGH GRADING WORK INCORPORATES ALL RECOMMENDATIONS CONTAINED IN THE REPORT OR REPORTS FOR WHICH I AM RESPONSIBLE AND ALL RECOMMENDATIONS THAT I HAVE MADE BASED ON FIELD INSPECTION OF THE WORK AND TESTING DURING GRADING. I FURTHER CERTIFY THAT WHERE THE REPORTS OF AN ENGINEERING GEOLOGIST, RELATIVE TO THIS SITE, HAVE RECOMMENDED THE INSTALLATION OF BUTTRESS FILLS OR OTHER SIMILAR STABILIZATION MEASURES, SUCH EARTHWORK CONSTRUCTION HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED DESIGN.

LOT NOS: LOT C, PARCEL 8

SEE REPORTS DATED: _____

FOR TEST DATA, RECOMMENDED ALLOWABLE SOIL BEARING VALUES & OTHER SPECIAL RECOMMENDATIONS.

SOILS ENGINEER _____ REG. NO _____ DATE _____
(SIGNATURE)

SEAL

(B) BY ENGINEERING GEOLOGIST

I CERTIFY THAT THE ROUGH GRADING WORK INCORPORATES ALL OF THE RECOMMENDATIONS CONTAINED IN THE REPORT OR REPORTS FOR WHICH I AM RESPONSIBLE AND ALL RECOMMENDATIONS THAT I HAVE MADE BASED ON FIELD INSPECTION OF THE WORK DURING GRADING.

LOT NOS: LOT C, PARCEL 8

ENGINEERING GEOLOGIST _____ CERT. NO. _____ DATE _____
(SIGNATURE)

SEAL

(C) BY CIVIL ENGINEER

I CERTIFY TO THE SATISFACTORY COMPLETION OF ROUGH GRADING INCLUDING GRADING TO APPROXIMATE FINAL ELEVATIONS; PROPERTY LINES LOCATED AND STAKED, CUT AND FILL SLOPES CORRECTLY GRADED AND LOCATED IN ACCORDANCE WITH THE APPROVED DESIGN; SWALES AND TERRACES GRADED READY FOR PAVING; BERMS INSTALLED; AND REQUIRED DRAINAGE SLOPES PROVIDED ON THE BUILDING PADS. I FURTHER CERTIFY THAT WHERE REPORT OR REPORTS OF AN ENGINEERING GEOLOGIST AND/OR SOILS ENGINEER HAVE BEEN PREPARED RELATIVE TO THIS SITE, THE RECOMMENDATIONS CONTAINED IN SUCH REPORTS HAVE BEEN INCORPORATED IN THE DESIGN.

LOT NOS: LOT C, PARCEL 8

CIVIL ENGINEER _____ REG. NO. _____ DATE _____
(SIGNATURE)

SEAL

FINAL GRADING CERTIFICATION

BY CIVIL ENGINEER

I CERTIFY TO THE SATISFACTORY COMPLETION OF GRADING IN ACCORDANCE WITH THE APPROVED PLANS. ALL DRAINAGE DEVICES REQUIRED BY THE GRADING PERMIT, GRADING PLANS AND GRADING ORDINANCE HAVE BEEN INSTALLED. EROSION TREATMENT OF SLOPES AND IRRIGATION SYSTEMS (WHERE REQUIRED) HAVE BEEN INSTALLED. ADEQUATE PROVISIONS HAVE BEEN MADE FOR DRAINAGE OF SURFACE WATERS FROM EACH BUILDING SITE AS OF THIS DATE.

LOT NOS: LOT C, PARCEL 8

CIVIL ENGINEER _____ REG. NO. _____ DATE _____
(SIGNATURE)

SEAL

GRADING CONTRACTOR CERTIFICATION

BY GRADING CONTRACTOR

I CERTIFY THAT THE GRADING WAS DONE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, THE GRADING ORDINANCE, AND THE RECOMMENDATIONS OF THE CIVIL ENGINEER, SOILS ENGINEER AND ENGINEERING GEOLOGIST. IT IS UNDERSTOOD THAT THIS CERTIFICATION INCLUDES ONLY THOSE ASPECTS OF THE WORK THAT CAN BE DETERMINED BY ME, AS A COMPETENT GRADING CONTRACTOR, WITHOUT SPECIAL EQUIPMENT OR PROFESSIONAL SKILLS.

GRADING CONTRACTOR _____ LICENSE NO. _____ DATE _____
(SIGNATURE)

INSTRUCTIONS: THE OWNER MAY SIGN IF THE GRADING WAS NOT DONE BY A LICENSED GRADING CONTRACTOR.

GENERAL STORMWATER NOTES:

THE LEGALLY RESPONSIBLE PERSON OF ANY PROPERTY IN WHICH GRADING ACTIVITIES OR OTHER SOIL DISTURBANCE ACTIVITIES ARE PERFORMED, INCLUDING PERMITTEE, SHALL COMPLY WITH THE LATEST AND APPLICABLE NPDES REQUIREMENTS. EFFECTIVE COMBINATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE INSTALLED BEFORE GRADING BEGINS. DURING GRADING ACTIVITIES, ALL BMP'S SHALL BE UPDATED AS NECESSARY TO PREVENT EROSION AND ANY ILLICIT DISCHARGE OF CONSTRUCTION RELATED POLLUTANTS. EROSION CONTROL BMP'S ARE LISTED ON COUNTY FORMS SW-1, SW-2, OR SW-HR.

1. **GENERAL CONSTRUCTION PERMIT.** PROJECTS THAT CAUSE SOIL DISTURBANCE OF ONE ACRE OR MORE, OR THAT ARE PART OF A COMMON PLAN OF DEVELOPMENT OR SALE THAT CAUSE SOIL DISTURBANCE OF ONE ACRE OR MORE ARE REQUIRED TO OBTAIN COVERAGE UNDER NPDES CALIFORNIA STATEWIDE GENERAL CONSTRUCTION PERMIT NO. CAS000002, AS A NUMBER ASSIGNED TO THE PROJECT BY THE STATE WATER RESOURCES CONTROL BOARD. COMPLETED AND SIGNED NOTICE OF INTENT (NOI) AND PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE SUBMITTED AND IMPLEMENTED DURING ALL GRADING ACTIVITIES.
2. **COUNTY'S STORM DRAIN SYSTEM.** ILLICIT DISCHARGES INTO THE COUNTY'S STORM DRAIN SYSTEM AS A RESULT OF GRADING, CLEARING, CONSTRUCTION, DEMOLITION, AND OTHER SOIL DISTURBANCE ACTIVITIES ARE PROHIBITED.
3. **INSPECTIONS.** EROSION CONTROL AND PERMANENT STORMWATER TREATMENT BMP'S ARE SUBJECT TO INSPECTIONS AS REQUIRED BY THE PERMIT ORDER NO. R4-2010-0108, AS AMENDED FROM TIME TO TIME.
4. **PUMPED WATER DISCHARGES.** DISCHARGES OF PUMPED GROUND WATER REQUIRE A DISCHARGE PERMIT FROM THE STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (RWQCB).
5. **SANITARY FACILITIES.** PORTABLE SANITARY FACILITIES SHALL BE LOCATED ON RELATIVELY LEVEL GROUND AWAY FROM TRAFFIC AREAS, DRAINAGE COURSES, AND STORM DRAIN INLETS.
6. **EMERGENCY WORK.** A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON (OCTOBER 1ST TO APRIL 15TH). NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF EMERGENCY DEVICES WHEN RAIN IS IMMINENT.

PROJECT BMP'S

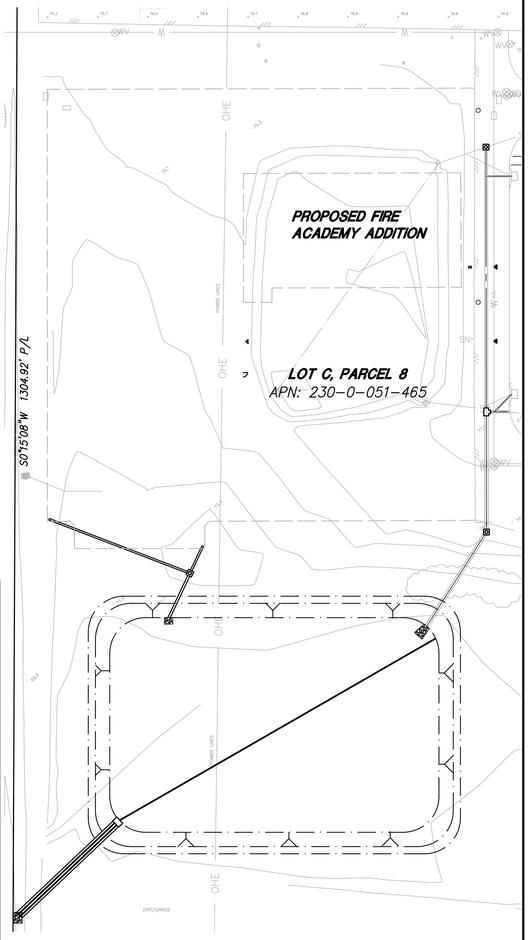
THE FOLLOWING BMPS AS OUTLINED IN, BUT NOT LIMITED TO, THE LATEST EDITION OF THE CASQA CONSTRUCTION BMP ONLINE HANDBOOK MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY THE PROJECT ENGINEER, QUALIFIED SWPPP DEVELOPER, PRACTITIONER OR THE BUILDING OFFICIAL). CERTAIN BMP'S ARE REQUIRED AS PART OF THE STORMWATER FORMS SW-1, SW-2 AND SW-HR, THE APPLICANT IS RESPONSIBLE FOR ENSURING THAT THE BMP'S LISTED HEREON, ARE IMPLEMENTED AND MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION. THE INSPECTOR OR BUILDING OFFICIAL MAY PERFORM UNANNOUNCED SITE INSPECTIONS TO ENSURE THAT THE PROJECT MAINTAINS THE BMP'S AS LISTED BELOW.

BMP DESCRIPTIONS AND DETAILS CAN BE OBTAINED FROM THE CALIFORNIA STORMWATER HANDBOOKS AT WWW.CASQA.ORG

COMPLETE CHECKLIST BELOW FOR APPLICABLE PROJECT BMP'S

EROSION CONTROL	
	EC1 – SCHEDULING
	EC2 – PRESERVATION EXISTING VEGETATION
	EC3 – HYDRAULIC MULCH
	EC4 – HYDROSEEDING
	EC5 – SOIL BINDERS
	EC6 – STRAW MULCH
	EC7 – GEOTEXTILES & MATS
	EC8 – WOOD MULCHING
	EC9 – EARTH DIKES & DRAINAGE SWALES
	EC10 – VELOCITY DISSIPATION DEV.
	EC11 – SLOPE DRAINS
	EC12 – STREAMBANK STABILIZATION
	EC14 – COMPOST BLANKETS
	EC15 – SOIL PREPARATION/ROUGHENING
	EC16 – NON-VEGETATED STABILIZATION
TEMPORARY SEDIMENT CONTROL	
	SE1 – SILT FENCE
	SE2 – SEDIMENT BASIN
	SE3 – SEDIMENT TRAP
	SE4 – CHECK DAM
	SE5 – FIBER ROLLS
	SE6 – GRAVEL BAG BERM
	SE7 – STREET SWEEPING AND VACUUMING
	SE8 – SANDBAG BARRIER
	SE9 – STRAW BALE BARRIER
	SE10 – STORM DRAIN INLET PROTECTION
	SE11 – ACTIVE TREATMENT SYSTEMS
	SE12 – TEMPORARY SILT DIKE
	SE13 – COMPOST SOCKS & BERMS
	SE14 – BIOFILTER BAGS
WIND EROSION CONTROL	
	WE1 – WIND EROSION CONTROL
EQUIPMENT TRACKING	
	TC1 – STABILIZED CONSTRUCTION ENTRANCE EXIT
	TC2 – STABILIZED CONSTRUCTION ROADWAY
	TC3 – ENTRANCE/OUTLET TIRE WASH

NON-STORMWATER MANAGEMENT	
	NS1 – WATER CONSERVATION PRACTICES
	NS2 – DEWATERING OPERATIONS
	NS3 – PAVING & GRINDING OPERATIONS
	NS4 – TEMPORARY STREAM CROSSING
	NS5 – CLEAR WATER DIVERSION
	NS6 – ILLICIT CONNECTION/DISCHARGE
	NS7 – POTABLE WATER/IRRIGATION
	NS8 – VEHICLE & EQUIPMENT CLEANING
	NS9 – VEHICLE & EQUIPMENT FUELING
	NS10 – VEHICLE & EQUIPMENT MAINTENANCE
	NS11 – PILE DRIVING OPERATIONS
	NS12 – CONCRETE CURING
	NS13 – CONCRETE FINISHING
	NS14 – MATERIAL & EQUIPMENT USE
	NS15 – DEMOLITION ADJACENT TO WATER
	NS16 – TEMPORARY BATCH PLANTS
WASTE MANAGEMENT & MATERIAL POLLUTION CONTROL	
	WM1 – MATERIAL DELIVERY & STORAGE
	WM2 – MATERIAL USE
	WM3 – STOCKPILE MANAGEMENT
	WM4 – SPILL PREVENTION & CONTROL
	WM5 – SOLID WASTE MANAGEMENT
	WM6 – HAZARDOUS WASTE MANAGEMENT
	WM7 – CONTAMINATION SOIL MANAGEMENT
	WM8 – CONCRETE WASTE MANAGEMENT
	WM9 – SANITARY/SEPTIC WASTE MANAGEMENT
	WM10 – LIQUID WASTE MANAGEMENT
ADDITIONAL BMP'S SELECTED	



INDEX MAP

SCALE: 1"=50'

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION	DRAWING NO.
1	GRADING IMPROVEMENT PLAN COVER SHEET	1
2	ROUGH GRADING IMPROVEMENT PLAN	2
3	ROUGH GRADING IMPROVEMENT PLAN LEGEND	3
4	STORM DRAIN IMPROVEMENT PLAN	4
5	STORM DRAIN IMPROVEMENT PLAN	5
6	HORIZONTAL CONTROL IMPROVEMENT PLAN	6
7	IMPROVEMENT PLAN DETAILS	7

NOTICE TO BIDDER

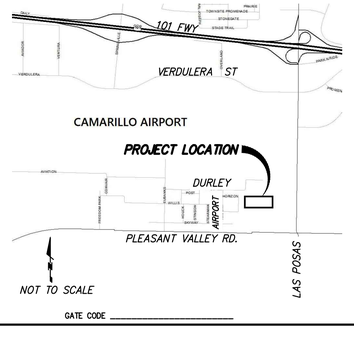
** EXCAVATING SOILS MAY BE SIGNIFICANTLY ABOVE THE OPTIMUM MOISTURE CONTENT AND REQUIRE REMEDIATION PRIOR TO USE AS FILL MATERIAL. TYPICAL REMEDIAL MEASURES INCLUDE DICING AND AERATING THE SOILS DURING DRY WEATHER, MIXING THE SOIL WITH DRYER MATERIALS, REMOVING AND REPLACING THE SOILS WITH AN APPROPRIATE FILL MATERIAL, OR MIXING THE SOIL WITH AN APPROVED HYDRATING AGENT SUCH AS LIME OR CEMENT PRODUCT. THE GRADING CONTRACTOR SHOULD ANTICIPATE THAT SOME REMEDIATION OF THE EXCAVATED SOILS WILL BE REQUIRED AND PLAN FOR THIS ACCORDINGLY IN THEIR BID.

** IT IS ANTICIPATED THAT PUMPING SOILS OR OTHERWISE UNSTABLE SOILS WILL BE PRESENT IN THE BOTTOM OF REMEDIAL EXCAVATIONS THAT WILL REQUIRE STABILIZATION PRIOR TO THE PLACEMENT OF FILL. STABILIZATION MEASURES MAY INCLUDE THE PLACEMENT OF 6 INCH MINUS ROCK (FLOAT ROCK) INTO EXCAVATION BOTTOM OR THE USE OF GEOTEXTILE FABRICS/GEOGRIDS IN COMBINATION WITH CRUSHED ROCK. THE GRADING CONTRACTOR SHOULD ACCOUNT FOR SOME SUBGRADE STABILIZATION IN HIS BID.

REGISTERED PROFESSIONAL ENGINEER — FREDERICK T. GIROUX — No. C 057289 — CIVIL — STATE OF CALIFORNIA

WDID: 512006 APN: APN: 230-0-030-085 GP _____

LOCATION & VICINITY MAP



GATE CODE _____

APPROVAL BY CONSULTANTS

THIS GRADING PLAN IS ACCEPTABLE IN REGARD TO SOILS (AND GEOLOGIC - IF APPLICABLE) CONDITIONS AND CONFORMS TO THE RECOMMENDATION OF THE SUPPORTIVE REPORT(S) DATED:

SOILS ENGINEERING REPORTS: _____ 20_____

_____ (SOILS ENGINEER SIGNATURE)

_____ (PRINT NAME) _____ (RCE NO.)

ENGINEERING GEOLOGY REPORTS: _____ 20_____

_____ (ENGINEERING GEOLOGIST SIGNATURE)

_____ (PRINT NAME) _____ CERT. NO.

I HEREBY STATE THAT THESE PLANS ARE IN COMPLIANCE WITH THE ADOPTED COUNTY STANDARDS, AND THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN THE PROFESSIONAL ENGINEERS ACT. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS BY THE COUNTY OF VENTURA IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF RECORD, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

_____ (CIVIL ENGINEER SIGNATURE)

_____ (PRINT NAME) _____ (RCE NO.)

OWNER/APPLICANT

V.C.C.C.D.
761 E DAILY DR.
CAMARILLO, CA 93010

805-652-5500

BENCH MARK DATA

0.9 MILE EASTERLY ALONG PLEASANT VALLEY ROAD FROM ITS INTERSECTION OF PLEASANT VALLEY ROAD AND EUBANKS STREET AT AN ENTRANCE TO CAMARILLO AIRPORT, 53.3 FEET EASTERLY FROM THE CENTER OF EUBANKS STREET, 4.0 FEET EASTERLY FROM A CORNER CHAIN LINK FENCE, 1.0 FOOT SOUTHERLY FROM A STEEL GUARD POST.

TOPOGRAPHY DATA

BASED ON TOPOGRAPHY SURVEY PERFORMED JULY, 25 2018

4					
3					
2					
1					
0	DESCRIPTION OF REVISION	RCE	DATE	APP.	APP. DATE

REV. OCT 2016

JENSEN DESIGN & SURVEY, INC
www.jdsurvi.com
1672 DONLON STREET
VENTURA, CALIF. 93003
PHONE 805/654-6977
FAX 805/654-6979

FREDERICK T. GIROUX RCE 057289 (EXP 12-31-19) DATE

APPROVED: COUNTY OF VENTURA

DATE: N/A

BY: N/A
DEVELOPMENT & INSPECTION SERVICES

COUNTY OF VENTURA
PUBLIC WORKS AGENCY
DEVELOPMENT & INSPECTION SERVICES

SPEC. NO. _____

PROJ. NO. RAS5923

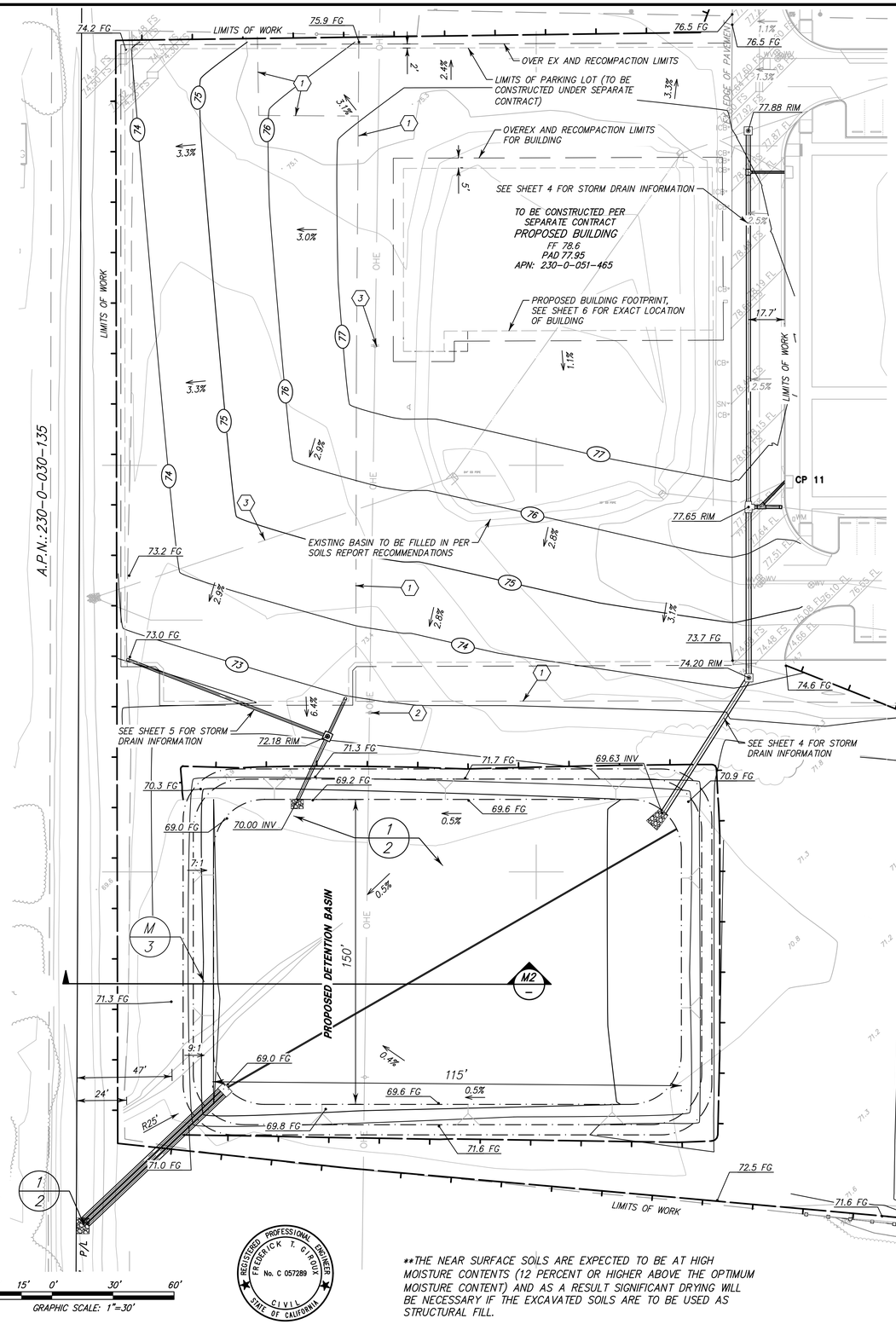
IMPROVEMENT PLAN COVER SHEET – ROUGH GRADE

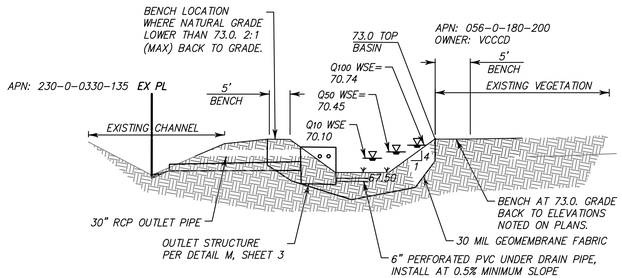
VCCCD FIRE ACADEMY, CAMARILLO

CAMARILLO, CA.

SHEET 1 OF 7

DRAWING NO. _____

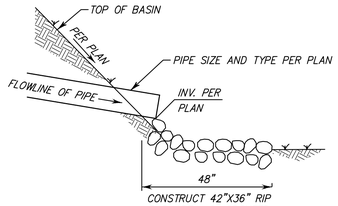




INFILTRATION BASIN NOTES: SEE TCM-1: DRY EXTENDED DETENTION BASIN IN VENTURA TECHNICAL GUIDANCE MANUAL FOR FURTHER DETAIL

- INFILTRATION BOTTOM AND SIDE SLOPES TO BE PLANTED WITH DROUGHT TOLERANT VEGETATION. DEEP ROOTED VEGETATION PREFERRED FOR BASIN BOTTOM. NO TOPSOIL SHALL BE ADDED TO TOPSOIL BED.
- OVER EXCAVATE BASIN BOTTOM 1 FOOT. REPLACE EXCAVATED MATERIAL UNIFORMLY WITHOUT COMPACTION AMENDING EXCAVATED MATERIAL WITH 2" – 4" OF COURSE SAND FOR SOILS WITH BORDER LINE INFILTRATION CAPACITY.
- REMOVE OF EXISTING BASIN MATERIAL AND PLACEMENT OF NEW FILL TO BE DONE PER SOILS REPORT RECOMMENDATIONS.

M2/2 OFF-SITE BASIN
NOT TO SCALE



1/2 OUTLET DETAIL
NOT TO SCALE

CONSTRUCTION NOTES:

1. EXISTING FENCE TO BE REMOVED.
2. EXISTING POWER POLE TO REMAIN (PROTECT IN PLACE).
3. EXISTING STORM DRAIN PIPES SECTIONS TO BE REMOVED.

GENERAL NOTES

- ALL FILL AREAS TO BE SCARIFIED AT SURFACE PER SOILS REPORT RECOMMENDATIONS
- OVER-EXCAVATION TO BE 2 FEET OUTSIDE PAVEMENT IMPROVEMENTS PER SOILS REPORT RECOMMENDATIONS.
- SEE SHEET 3 FOR LEGEND
- SEE UTILITY SHEET 4 AND 5 FOR STORM DETAILS.
- BACKFILL AND COMPACTION TO MEET SOILS ENGINEER RECOMMENDATIONS SET FORTH IN SOILS REPORT. SEE SHEET 3 FOR FURTHER DETAILS.

**THE NEAR SURFACE SOILS ARE EXPECTED TO BE AT HIGH MOISTURE CONTENTS (12 PERCENT OR HIGHER ABOVE THE OPTIMUM MOISTURE CONTENT) AND AS A RESULT SIGNIFICANT DRYING WILL BE NECESSARY IF THE EXCAVATED SOILS ARE TO BE USED AS STRUCTURAL FILL.

REGISTERED PROFESSIONAL ENGINEER FREDERICK T. GIROUX No. C 057289 CIVIL STATE OF CALIFORNIA

REVISION	DESCRIPTION	RCE	APP.	DATE
D				
C				
B				
A				
Δ				

JENSEN DESIGN & SURVEY, INC
www.jdscivil.com
1672 DONLON STREET
VENTURA, CALIF. 93003
PHONE 805/654-6977
FAX 805/654-6979
FREDERICK T. GIROUX RCE 057289 (EXP 12-31-19) DATE

DESIGNED FTG DRAWN RQ
APPROVED: COUNTY OF VENTURA
DATE:
BY: MANAGER, DEVELOPMENT & INSPECTION SERVICES

COUNTY OF VENTURA
PUBLIC WORKS AGENCY
DEVELOPMENT SERVICES

SPEC. NO.
PROJ. NO.

ROUGH GRADING IMPROVEMENT PLAN
VCCCD FIRE ACADEMY, CAMARILLO
CAMARILLO, CA

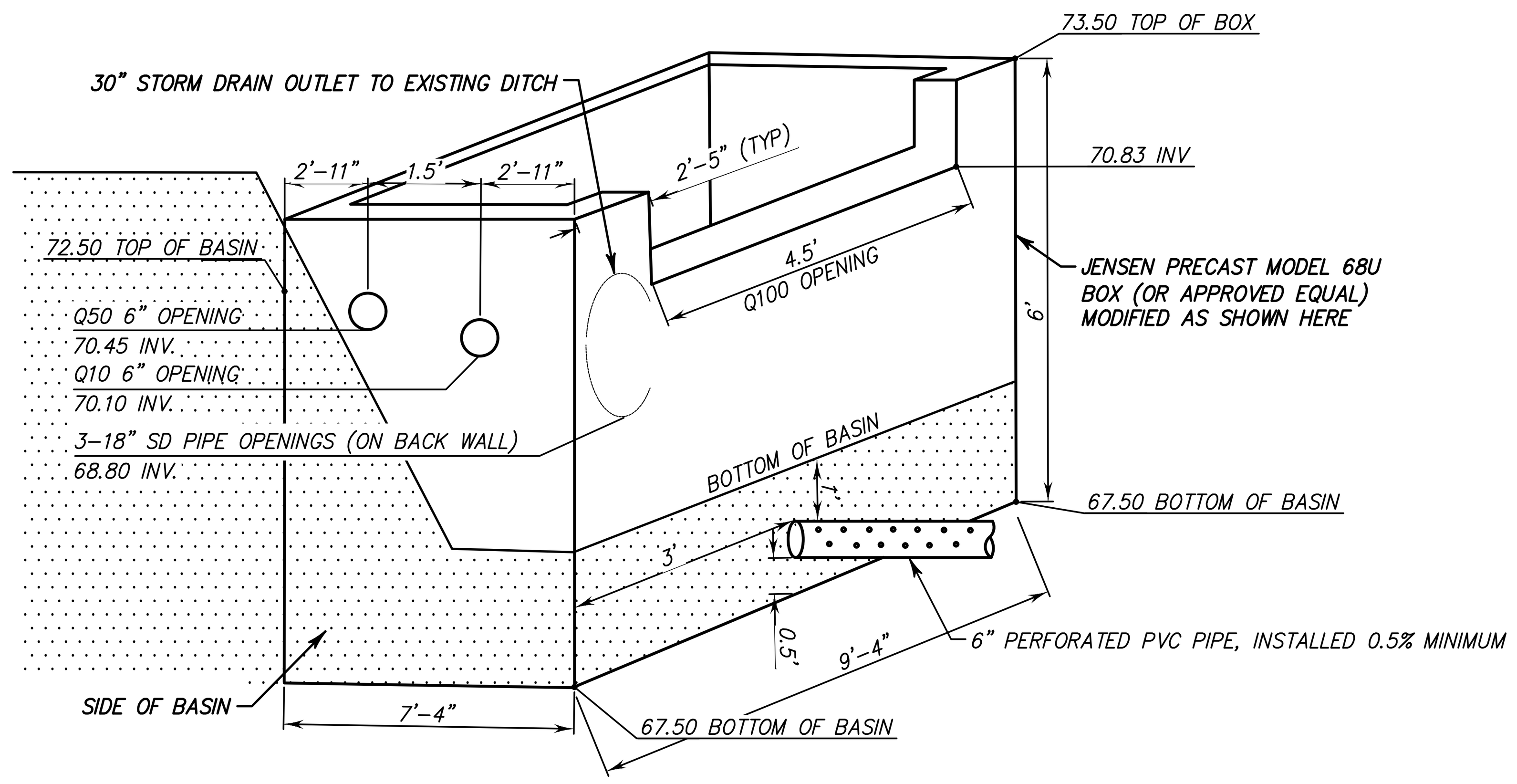
SHEET 2 OF 10
DRAWING NO.

Oct 25, 2019
GRADING

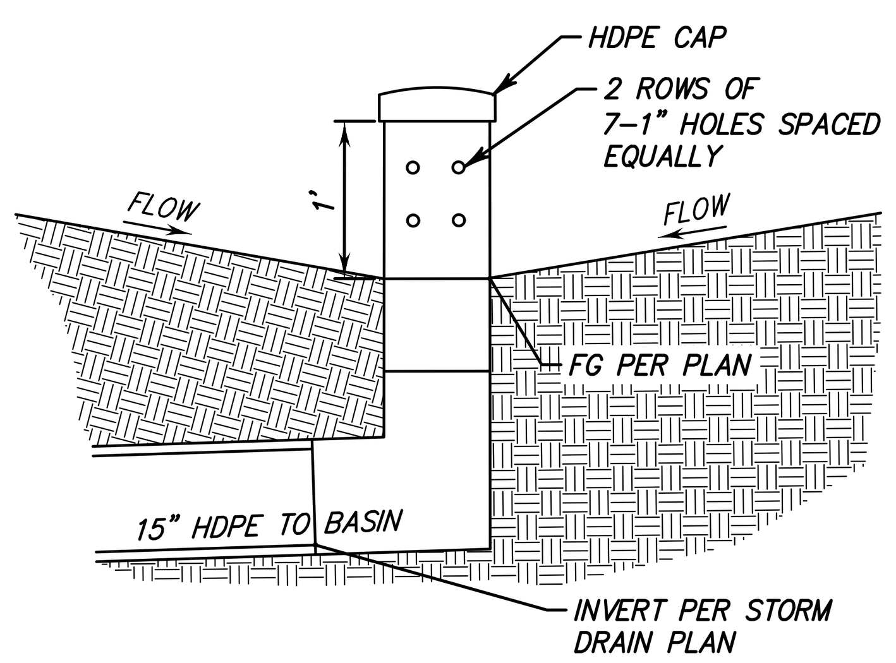
J:\VA\2522\01\prg\Improvement Plans\1522-1-02-ROP.dwg Oct 25, 2019, 1:58pm rgroux

SOILS NOTES: PER SOILS REPORT 19-6-39 BY EARTH SYSTEMS

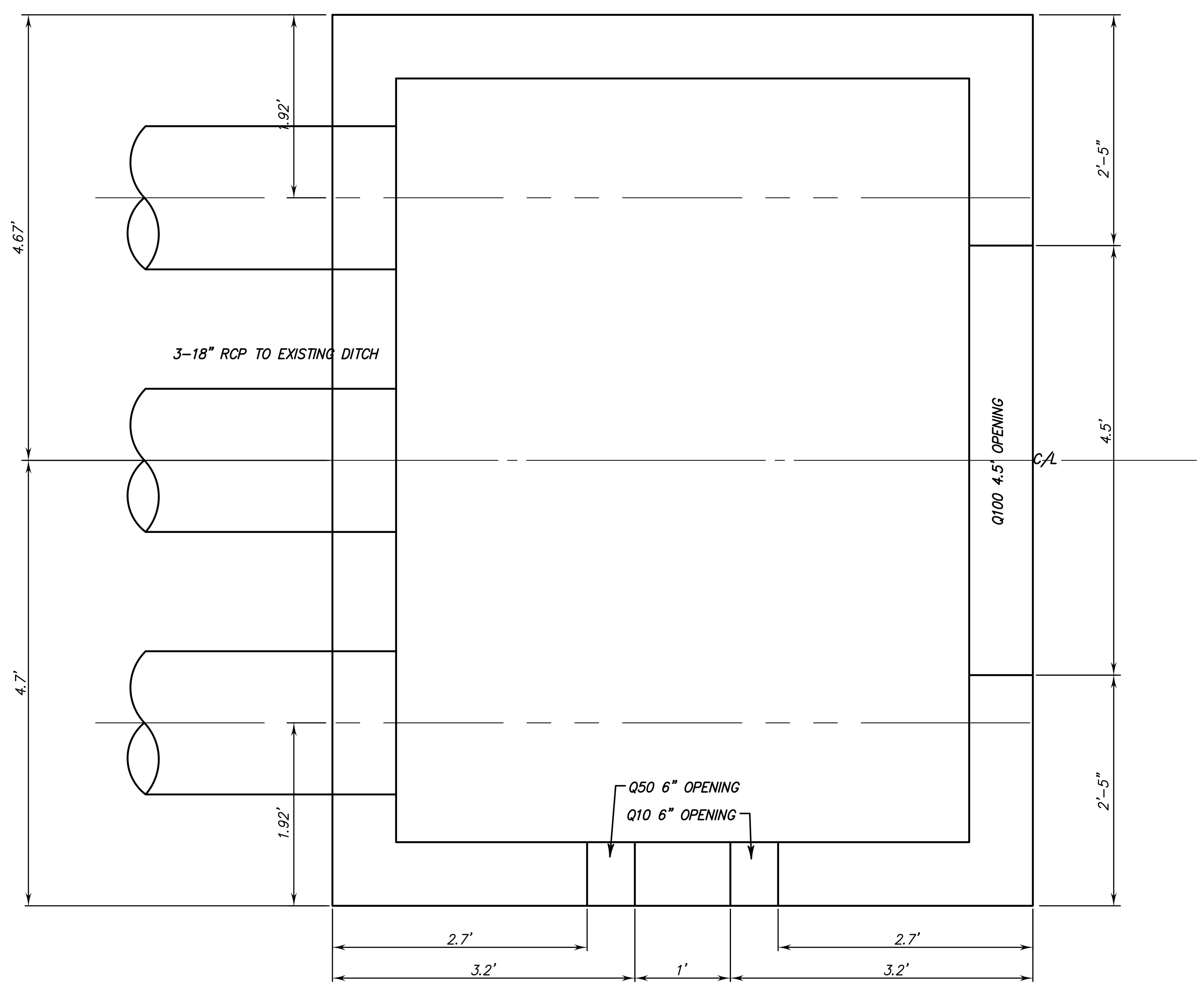
- ALL FILL AREAS TO BE SCARIFIED AT SURFACE PER SOILS REPORT RECOMMENDATIONS.
- OVER-EXCAVATION TO BE 2 FEET OUTSIDE PAVEMENT IMPROVEMENTS AND 5 FEET OUTSIDE BUILDING LIMITS PER SOILS REPORT RECOMMENDATIONS.
- COMPACTION OF SUBGRADE TO MEET SOILS ENGINEER RECOMMENDATIONS SET FORTH IN SOILS REPORT.
- THE NEAR SURFACE SOILS ARE EXPECTED TO BE AT HIGH MOISTURE CONTENTS (12 PERCENT OR HIGHER ABOVE THE OPTIMUM MOISTURE CONTENT), AS A RESULT SIGNIFICANT DRYING WILL BE NECESSARY IF THE EXCAVATED SOILS ARE TO BE USED AS STRUCTURAL FILL.
- BECAUSE OF THE ANTICIPATED WET SOIL CONDITIONS, ANY REMEDIAL EXCAVATIONS OR UTILITY TRENCH EXCAVATIONS, STABILIZATION OF THE EXCAVATION BOTTOMS WILL BE REQUIRED PRIOR TO PLACING FILL.
- NO COMPACTED FILL SHOULD BE PLACED UNLESS THE UNDERLYING SOIL HAS BEEN OBSERVED BY THE GEOTECHNICAL ENGINEER.
- ON-SITE SOILS MAY BE USED FOR FILL ONCE THEY ARE CLEANED OF ALL ORGANIC MATERIAL, ROCK, DEBRIS, AND IRREDUCIBLE MATERIAL LARGER THAN 6 INCHES. EXCAVATED SOILS ARE EXPECTED TO BE AT A HIGH MOISTURE CONTENT AND DRYING WILL BE NECESSARY BEFORE REPLACING AS COMPACTED BACKFILL.
- BACKFILL AROUND OR ADJACENT TO CONFINED AREAS MAY BE PERFORMED WITH A LEAN SAND/CEMENT SLURRY (MAXIMUM 28-DAY COMPRESSIVE STRENGTH OF 200 PSI) OR "FLOWABLE FILL" MATERIAL (A MIXTURE OF SAND/CEMENT/FLY ASH). THE FLUIDITY AND LIFT PLACEMENT THICKNESS OF ANY SUCH MATERIAL SHOULD BE CONTROLLED IN ORDER TO PREVENT "FLOATING" OF ANY "SUBMERGED" STRUCTURE. ALTERNATIVELY, A GRAVEL BACKFILL COULD BE USED, SUBJECT TO APPROVAL BY THE GEOTECHNICAL ENGINEER.
- IF PUMPING SOILS OR OTHERWISE UNSTABLE SOILS ARE ENCOUNTERED DURING THE OVER-EXCAVATION, STABILIZATION OF THE EXCAVATION BOTTOM WILL BE REQUIRED PRIOR TO PLACING FILL USING METHODS SET FORTH IN THE SOILS REPORT AND UNDER SUPERVISION OF THE GEOTECHNICAL ENGINEER.



M/3 BASIN OUTLET STRUCTURE
SCALE: 1"=2'



2/3 TEMPORARY HDPE RISER DETAIL
NOT TO SCALE



M/3 BASIN OUTLET STRUCTURE - PLAN VIEW
SCALE: 1"=1'

LEGEND & ABBREVIATIONS:

ABBREVIATIONS

AC = ASPHALT PAVEMENT
ASTM = AMERICAN SOCIETY for TESTING & MATERIALS
BC = BEGIN CURVE
BCR = BEGIN CURVE RADIUS
BLDG = BUILDING
BLK = BLOCK
BOP = BOTTOM OF PIPE
BSW = BACK OF SIDEWALK
CFS = CUBIC FOOT PER SECOND
C/L = CENTERLINE
C.L. = CHAIN LINK
CB = CATCH BASIN
CF= CURB FACE
CMP = CORRUGATED METAL PIPE
C.O.C. = CITY OF CAMARILLO
SCO = SEWER CLEANOUT
CONC. =CONCRETE
EC = END CURVE
ECR = END CURVE RADIUS
EG = EXISTING GRADE
EP = EDGE OF PAVEMENT
FG = FINISHED GRADE
FH = FIRE HYDRANT
FL = FLOW LINE
FPS = FEET PER SECOND
FS = FINISHED SURFACE
G = GAS
GR= GRADE
GB = GRADE BREAK
HGL = HYDRO GRADE LINE
INV. = INVERT
IRR = IRRIGATION WATER MAIN
KHPS = KILOHERTZ PER SECOND
LAT = LATERAL
LF = LINEAR FEET
LP = LOW POINT
MH = MANHOLE
MOC = MIDDLE OF CURVE
PCC =POINT OF COMPOUND CURVE
P/L =PROPERTY LINE
PP = POWER POLE
P.M.B. = PROCESSED MISCELLANEOUS BASE
P.O.C. = POINT OF CONNECTION
PUE = PUBLIC UTILITY EASEMENT
PRC = POINT OF REVERSE CURVE
PVC = POLYVINYL CHLORIDE
PVI = POINT OF VERTICAL INVERT
PVT. = PRIVATE
PWA= PUBLIC WORKS AGENCY
RCP = REINFORCED CONCRETE PIPE
R/W = RIGHT OF WAY
S/W = SIDEWALK
SD = STORM DRAIN
SDR = STANDARD DIMENSION RATIO
SS = SANITARY SEWER
S.P.P.W.C. = STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
ST = STREET LIGHT
TC = TOP OF CURB
TF = TOP OF FOOTING
TG = TOP OF GRATE
TOP = TOP OF PIPE
TW = TOP OF WALL
TRW = TOP OF RETAINING WALL
VC = VERTICAL CURVE
VCP = VITRIFIED CLAY PIPE
V.P.U.E.= PUE TO VERIZON
W.S.E.L. = WATER SURFACE ELEVATION
WM = WATER METER
WV = WATER VALVE
L.O.S. = LINE OF SIGHT

PROPOSED

AC AIR CONDITIONING PAD
BLOCK WALL
CATCH BASIN
CUT/FILL
DAYLIGHT
EASEMENT LINE
X FENCE
FIRE HYDRANT
FLOWLINE/SWALE
RETAINING WALL
SAWCUT LINE
SURFACE DRAIN W/ATRIUM
SURFACE DRAIN
STREET LIGHT
STREET SIGN
SD STORM DRAIN
S SEWER
SLOPE
TS TRAFFIC SIGNAL CONDUIT
W WATER
RW RECYCLED WATER
PROPERTY LINE
TRACT BOUNDARY
RIGHT OF WAY
WATER VALVE
THRUST BLOCK
WATER METER
WATER BLOW OFF
WATER AIR-VAC
WATER SAMPLING STATION
SEWER LATERAL
SEWER MANHOLE
STORM DRAIN MANHOLE
STORM DRAIN JUNCTION STRUCTURE
GRADE BREAK
ADA PATH OF TRAVEL
DEEPENED BACK OF CURB
1" DENOTES KING LUMINAIRE K118 OR AMERON LUMINAIRE 150 WATT @ INTERSECTIONS AND 100 WATT FOR ALL OTHERS
DS DOWN SPOUTS
ASPHALT PAVEMENT THICKNESS PER PLAN (HEAVY TRAFFIC)
TYPE II SLURRY SEAL
TREE

EXISTING

BLOCK WALL
(10) CONTOUR LINE
FIRE HYDRANT
G GAS
O/H E OVERHEAD ELEC.
RW RECLAIMED WATER
S SEWER
STREET LIGHT
STREET SIGN
STORM DRAIN
W WATER
WATER VALVE
T TELEPHONE
X FENCE
SEWER MANHOLE
(00.00 TC) (00.00 FL) EXISTING
STEP IN FINISH FLOOR
TREE PLANTER

ABBREVIATIONS CONTINUED

A.B. = AGGREGATE BASE
A.P. = ANGLE POINT
C.A.B. = CRUSHED AGGREGATE BASE
RW = RECYCLED WATER
D.I. = DUCTILE IRON
O.C. = ON CENTER
PA = PLANTER AREA
VCWPD = VENTURA COUNTY WATERSHED PROTECTION DISTRICT

Oct 25, 2019 GRADING

NOTICE TO THE CONTRACTOR

THE EARTHWORK SUMMARY IS PROVIDED AS A COURTESY AND CONVENIENCE TO THE CONTRACTOR. QUANTITIES SHOWN ARE APPROXIMATE, BASED ON THE DIFFERENCES BETWEEN EXISTING GROUND ELEVATIONS AND ROUGH GRADE ELEVATIONS. QUANTITIES PROVIDED MAKE NO PROVISIONS FOR STRIPPING, OR OVEREXCAVATION. VARIABLES SUCH AS COMPACTION, SHRINKAGE AND THE CONTRACTORS METHOD OF OPERATION, WILL CAUSE THE VOLUME OF DIRT MOVED IN THE FIELD TO DEVIATE FROM THE CALCULATED QUANTITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EARTHWORK REQUIREMENTS TO ROUGH GRADE THIS JOB.

CAUTION:

EXISTING UTILITIES WERE LOCATED FROM BEST AVAILABLE INFORMATION. CONTRACTOR SHALL POTHOLE AND LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

** CONTRACTOR SHALL VERIFY BUILDING SLAB SECTIONS WITH SOILS REPORT AND STRUCTURAL DRAWINGS AND NOTIFY CIVIL ENGINEER IMMEDIATELY IF THERE IS A DISCREPANCY.

REGISTERED PROFESSIONAL ENGINEER
FREDERICK T. GIROUX
No. C 057289
CIVIL
STATE OF CALIFORNIA

D				
C				
B				
A				
△ REVISION	DESCRIPTION	RCE	APP.	DATE

JENSEN DESIGN & SURVEY, INC
www.jdscivil.com
1672 DONLON STREET
VENTURA, CALIF. 93003
PHONE 805/654-6977
FAX 805/654-6979
FREDERICK T. GIROUX RCE 057289 (EXP 12-31-19) DATE

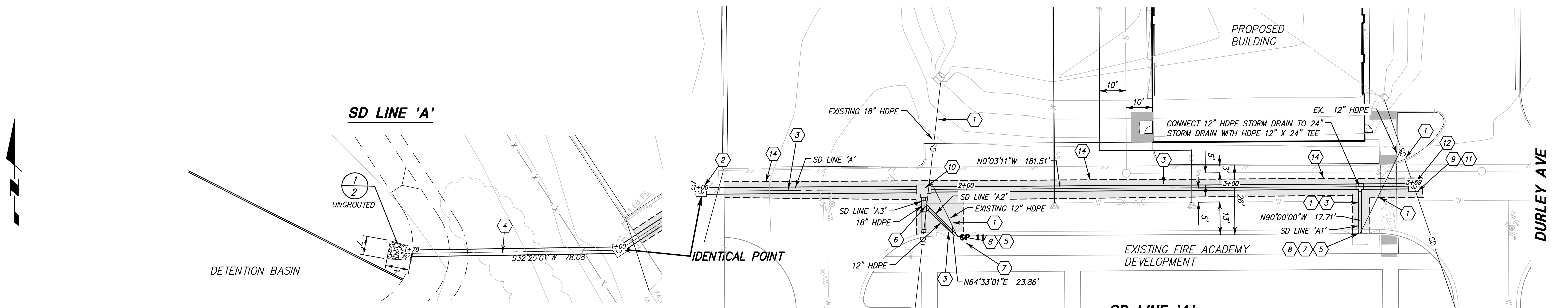
DESIGNED FTG DRAWN RQ
APPROVED: COUNTY OF VENTURA
DATE:
BY: MANAGER, DEVELOPMENT & INSPECTION SERVICES

COUNTY OF VENTURA
PUBLIC WORKS AGENCY
DEVELOPMENT SERVICES

SPEC. NO.
PROJ. NO.

ROUGH GRADING IMPROVEMENT PLAN
VCCCD FIRE ACADEMY, CAMARILLO
CAMARILLO, CA

PROFILE SCALE:
HOR: 1"= 20'
VER: 1" = 2'

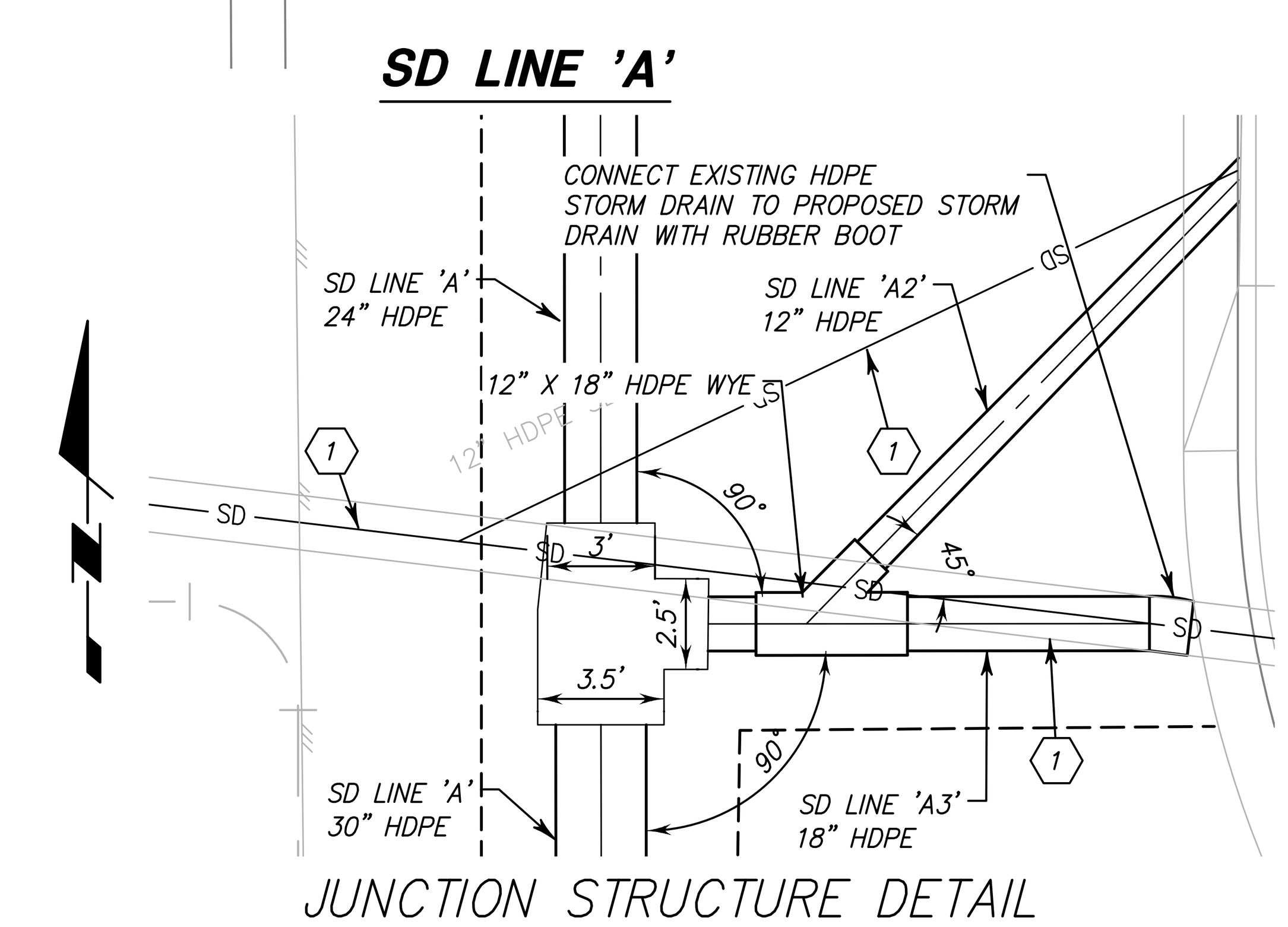


CONSTRUCTION NOTES

1. REMOVE EXISTING CONFLICTING STORM DRAIN OR ABANDON EXISTING STORM DRAIN.
2. INSTALL MANHOLE PER DETAIL M, SHEET 7 .
3. INSTALL HDPE STORM DRAIN. INVERT PER PLAN, SIZE AND SLOPE PER PROFILE.
4. INSTALL RCP STORM DRAIN. INVERT PER PLAN, SIZE AND SLOPE PER PROFILE.
5. INSTALL INLET ADS FLEXSTORM CPS DROPINLET FILTER INSERT OR APPROVED EQUAL.
6. CONNECT 12" HDPE TO 18" HDPE. INSTALL HDPE 18" X 12" WYE.
7. INSTALL "DON'T DUMP, DRAINS TO CREEK" CURB MARKERS.
8. CONNECT TO EXISTING CATCH BASIN PER DETAIL O, SHEET 7 AND INSTALL FLEXSTORM CONNECTOR PIPE TRASH SCREEN (OR APPROVED EQUAL) OVER OUTLET PIPE.
9. INSTALL TRITON BFTG FTC CPS SERIES CRESCENT PIPE SCREEN (OR APPROVED EQUAL) OVER OUTLET PIPE.
10. INSTALL JUNCTION STRUCTURE PER DETAIL N, SHEET 7, EXCEPT WHERE MODIFIED AT RIGHT. DIMENSIONS IN TABLE AT RIGHT.
11. CONNECT EXISTING STORM DRAIN TO NEW MANHOLE PER DETAIL M, SHEET 7. INVERT PER PLAN.
12. REMOVE EXISTING JUNCTION STRUCTURE AND CONSTRUCT JUNCTION STRUCTURE WITH MANHOLE COVER IN PLACE PER DETAIL M, SHEET 7.
13. INSTALL TEMPORARY PERFORATED RISER PER DETAIL 2, SHEET 3.
14. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT AND PLACE WITH TEMPORARY COLD MIX PATCH.

GENERAL NOTES

- EXISTING UTILITIES WERE LOCATED FROM BEST AVAILABLE INFORMATION. CONTRACTOR SHALL POTHOLE AND VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- ALL PATCH WORK TO BE TEMPORARY COLD MIX PATCH. LEGEND ON SHEET 3.



JUNCTION STRUCTURE DETAIL

MANHOLE PIPE TO PIPE	
D1	24"
D2	30"
B	18"
M	4' 4"
C	18"

20' 10' 0' 20' 40'
GRAPHIC SCALE: 1"=20'

REGISTERED PROFESSIONAL ENGINEER FREDERICK T. GIROUX No. C 057289 CIVIL STATE OF CALIFORNIA

	REVISION	DESCRIPTION	RCE	APP.	DATE
D					
C					
B					
A					
△					

JENSEN DESIGN & SURVEY, INC
www.jdscivil.com
1672 DONLON STREET
VENTURA, CALIF. 93003
PHONE 805/654-6977
FAX 805/654-6979
FREDERICK T. GIROUX RCE 057289 (EXP 12-31-19) DATE

DESIGNED FTG DRAWN RQ
APPROVED: COUNTY OF VENTURA
DATE:
BY:
MANAGER, DEVELOPMENT & INSPECTION SERVICES

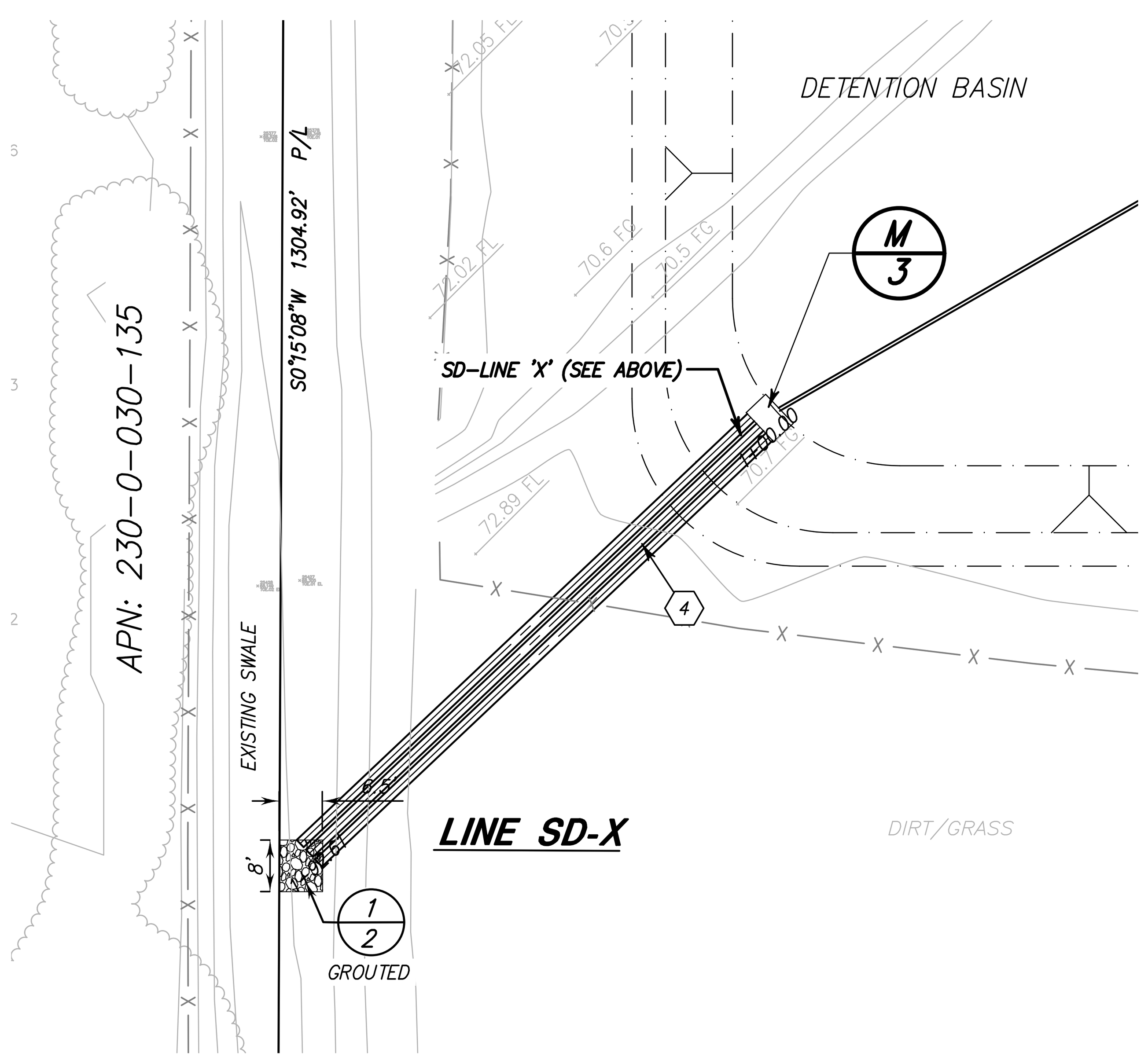
COUNTY OF VENTURA
PUBLIC WORKS AGENCY
DEVELOPMENT SERVICES

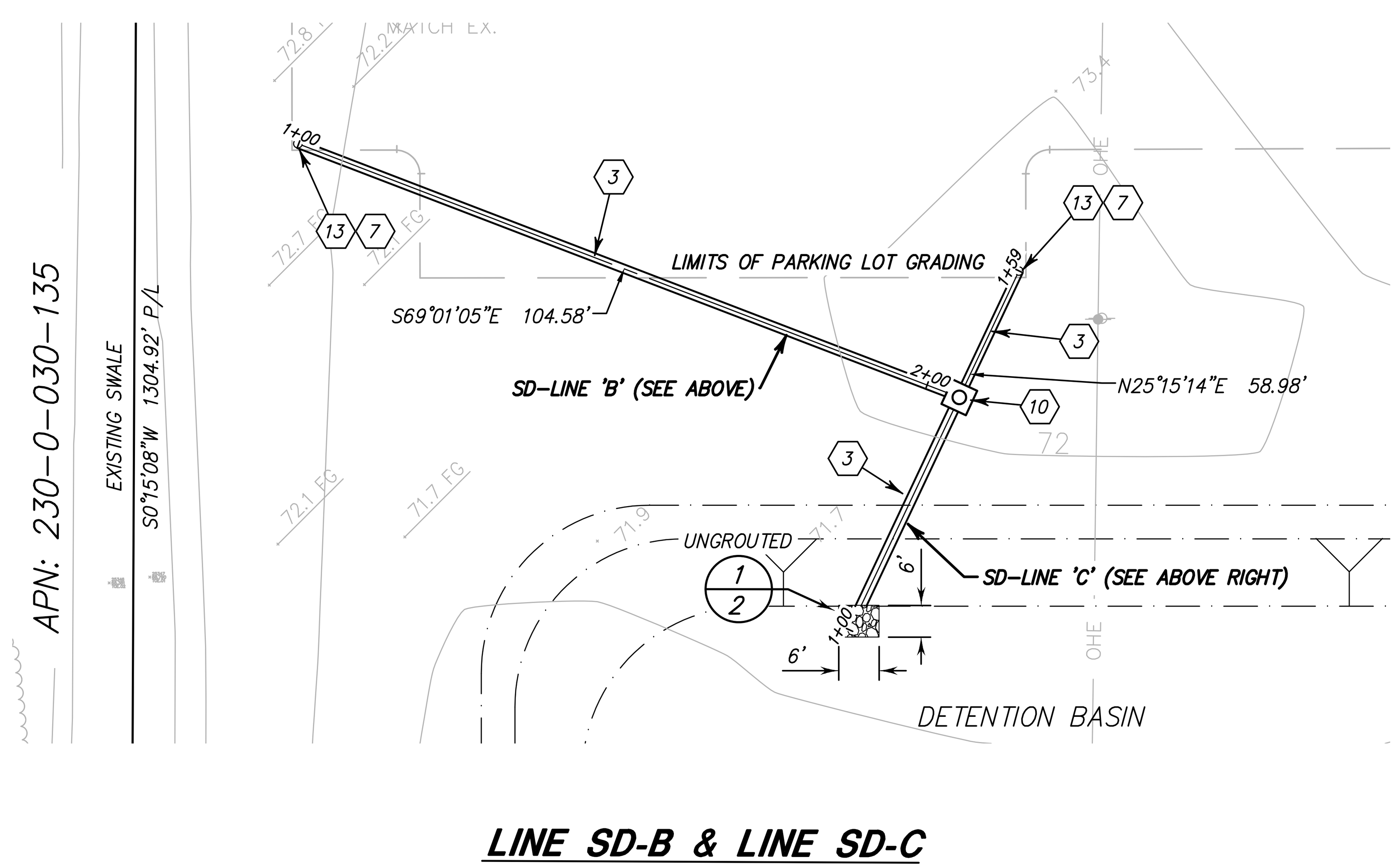
SPEC. NO.
PROJ. NO.

STORM DRAIN IMPROVEMENT PLAN
VCCCD FIRE ACADEMY, CAMARILLO
CAMARILLO, CA.

SHEET 4 OF 7
DRAWING NO.

PROFILE SCALE:
HOR: 1"= 20'
VER: 1" = 2'





CONSTRUCTION NOTES

1. REMOVE EXISTING CONFLICTING STORM DRAIN OR ABANDON EXISTING STORM DRAIN.
2. INSTALL MANHOLE PER DETAIL M, SHEET 7 .
3. INSTALL HDPE STORM DRAIN. INVERT PER PLAN, SIZE AND SLOPE PER PROFILE.
4. INSTALL RCP STORM DRAIN. INVERT PER PLAN, SIZE AND SLOPE PER PROFILE.
5. INSTALL INLET ADS FLEXSTORM CPS DROPINLET FILTER INSERT OR APPROVED EQUAL.
6. CONNECT 12" HDPE TO 18" HDPE. INSTALL HDPE 18" X 12" WYE.
7. INSTALL "DON'T DUMP, DRAINS TO CREEK" CURB MARKERS.
8. CONNECT TO EXISTING CATCH BASIN PER DETAIL N, SHEET 9 AND INSTALL FLEXSTORM CONNECTOR PIPE TRASH SCREEN (OR APPROVED EQUAL) OVER OUTLET PIPE.
9. INSTALL TRITON BFTG FTC CPS SERIES CRESCENT PIPE SCREEN (OR APPROVED EQUAL) OVER OUTLET PIPE.
10. INSTALL JUNCTION STRUCTURE PER DETAIL N, SHEET 7, EXCEPT WHERE MODIFIED AT RIGHT. DIMENSIONS IN TABLE AT RIGHT.
11. CONNECT EXISTING STORM DRAIN TO NEW MANHOLE PER DETAIL M, SHEET 7. INVERT PER PLAN.
12. REMOVE EXISTING JUNCTION STRUCTURE AND CONSTRUCT JUNCTION STRUCTURE WITH MANHOLE COVER IN PLACE PER DETAIL M, SHEET 7.
13. INSTALL TEMPORARY PERFORATED RISER PER DETAIL 2, SHEET 3.
14. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT AND REPLACE WITH COLD MIX PATCH.

GENERAL NOTES

- EXISTING UTILITIES WERE LOCATED FROM BEST AVAILABLE INFORMATION. CONTRACTOR SHALL POTHOLE AND VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- STORM DRAIN LINE 'A' ON SHEET 5, TO BE CONSTRUCTED PER SEPARATE CONTRACT, WITH ROUGH GRADING

GRAPHIC SCALE: 1"=20'

Oct 25, 2019 STORM DRAIN

D				
C				
B				
A				
△	REVISION DESCRIPTION	RCE	APP.	DATE

JENSEN DESIGN & SURVEY, INC
www.jdscivil.com
1672 DONLON STREET VENTURA, CALIF. 93003 PHONE 805/654-6977 FAX 805/654-6979

FREDERICK T. GIROUX RCE 057289 (EXP 12-31-19) DATE

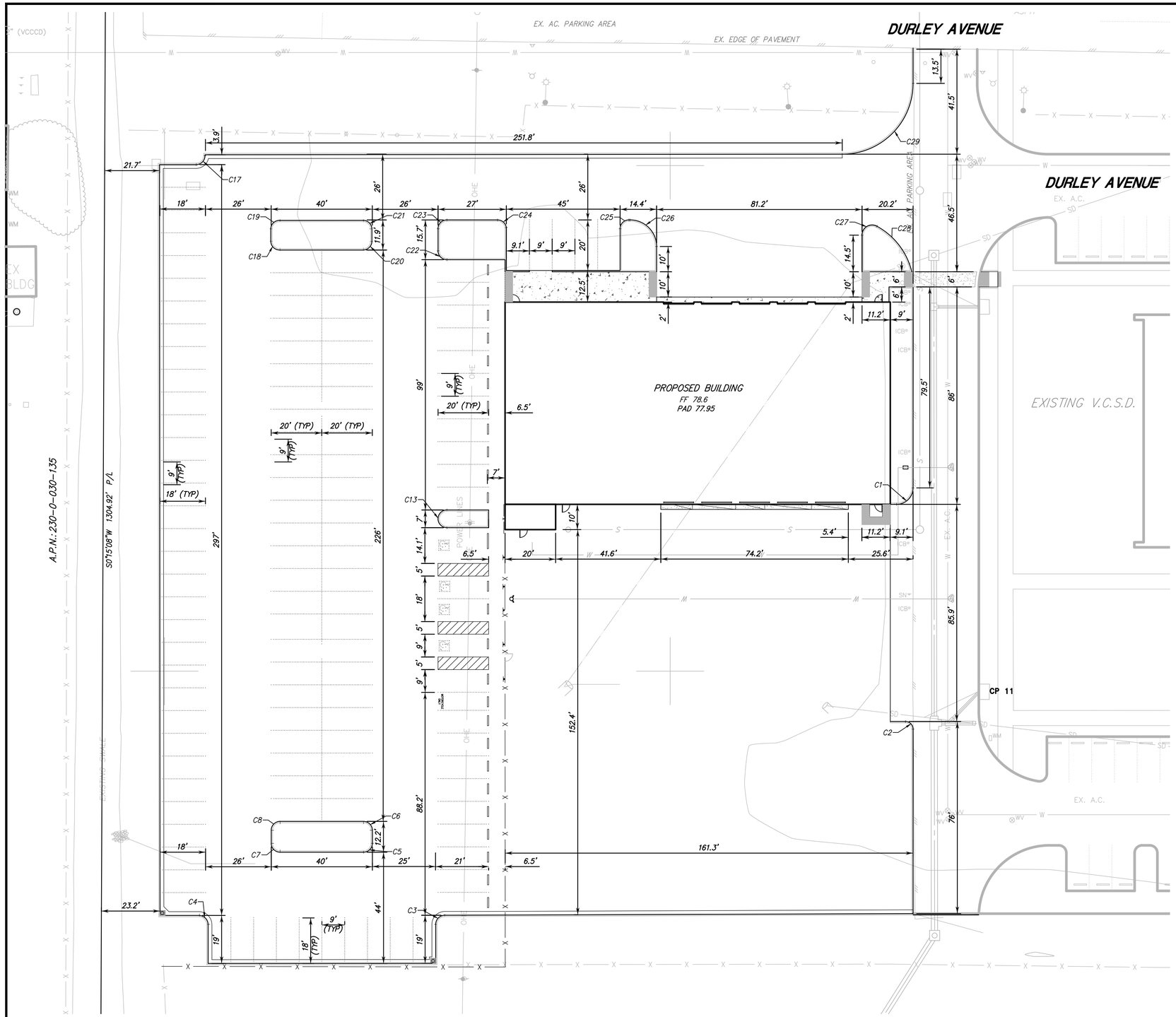
DESIGNED FTG DRAWN RQ
APPROVED: COUNTY OF VENTURA
DATE:
BY: MANAGER, DEVELOPMENT & INSPECTION SERVICES

COUNTY OF VENTURA
PUBLIC WORKS AGENCY
DEVELOPMENT SERVICES

SPEC. NO.
PROJ. NO.

STORM DRAIN IMPROVEMENT PLAN
VCCCD FIRE ACADEMY, CAMARILLO
CAMARILLO, CA.

SHEET 5 OF 7
DRAWING NO.



Curve Table (This sheet only)

Curve #	L	R	Δ	T
C1	10.21'	6.50'	90°00'00"	6.50'
C2	4.71'	3.00'	90°00'00"	3.00'
C3	5.64'	3.63'	88°57'41"	3.57'
C4	5.73'	3.59'	91°27'11"	3.68'
C5	5.50'	3.50'	90°00'00"	3.50'
C6	5.49'	3.48'	90°30'15"	3.51'
C7	5.50'	3.50'	90°00'00"	3.50'
C8	5.50'	3.52'	89°29'52"	3.49'
C13	11.00'	3.50'	180°00'00"	INFINITY'
C17	5.50'	3.50'	90°00'00"	3.50'
C18	5.51'	3.47'	90°51'45"	3.53'
C19	5.25'	3.43'	87°48'34"	3.30'
C20	5.50'	3.50'	90°00'00"	3.50'
C21	5.50'	3.50'	90°00'00"	3.50'
C22	5.50'	3.50'	90°00'00"	3.50'
C23	5.50'	3.50'	90°00'00"	3.50'
C24	5.04'	3.46'	83°28'20"	3.09'
C25	5.50'	3.50'	90°00'00"	3.50'
C26	16.49'	10.50'	90°00'00"	10.50'
C27	8.29'	4.00'	118°44'37"	6.76'

Curve Table (This sheet only)

Curve #	L	R	Δ	T
C28	23.31'	28.01'	47°40'16"	12.38'
C29	43.98'	28.00'	90°00'00"	28.00'

GENERAL NOTES:

** PLACEMENT OF ASPHALT AND CONCRETE AND CONSTRUCTION OF BUILDING TO BE DONE UNDER SEPARATE CONTRACT AT LATER DATE.
** THIS SHEET TO BE USED FOR THE PURPOSE OF LOCATING THE BUILDING AND PAVED AREAS. LOCATION TO BE USE BY ROUGH GRADING CONTRACTOR TO PREPARE THE SITE TO THE STANDARDS SET FORTH BY THE GEOTECHINCAL AND CIVIL ENGINEERS RECOMMENDATIONS.

REGISTERED PROFESSIONAL ENGINEER
FREDERICK T. GIROUX
No. C 057289
CIVIL
STATE OF CALIFORNIA

20' 10' 0' 20' 40'
GRAPHIC SCALE: 1"=20'

Oct 25, 2019
HORIZONTAL CONTROL

D				
C				
B				
A				
△	REVISION DESCRIPTION	RCE	APP.	DATE

JENSEN DESIGN & SURVEY, INC
www.jdscivil.com
1672 DONLON STREET
VENTURA, CALIF. 93003
PHONE 805/654-6977
FAX 805/654-6979
FREDERICK T. GIROUX RCE 057289 (EXP 12-31-19) DATE

DESIGNED FTG DRAWN RQ
APPROVED: COUNTY OF VENTURA
DATE:
BY: MANAGER, DEVELOPMENT & INSPECTION SERVICES

COUNTY OF VENTURA
PUBLIC WORKS AGENCY
DEVELOPMENT SERVICES

SPEC. NO.
PROJ. NO.

HORIZONTAL CONTROL PLAN – ROUGH GRADE
VCCCD FIRE ACADEMY, CAMARILLO
CAMARILLO, CA.

SHEET 6 OF 7
DRAWING NO.

V:\2425\2021\Eng\Improvement Plans\19021_09_HC.dwg Oct 25, 2019, 2:03pm rgroux

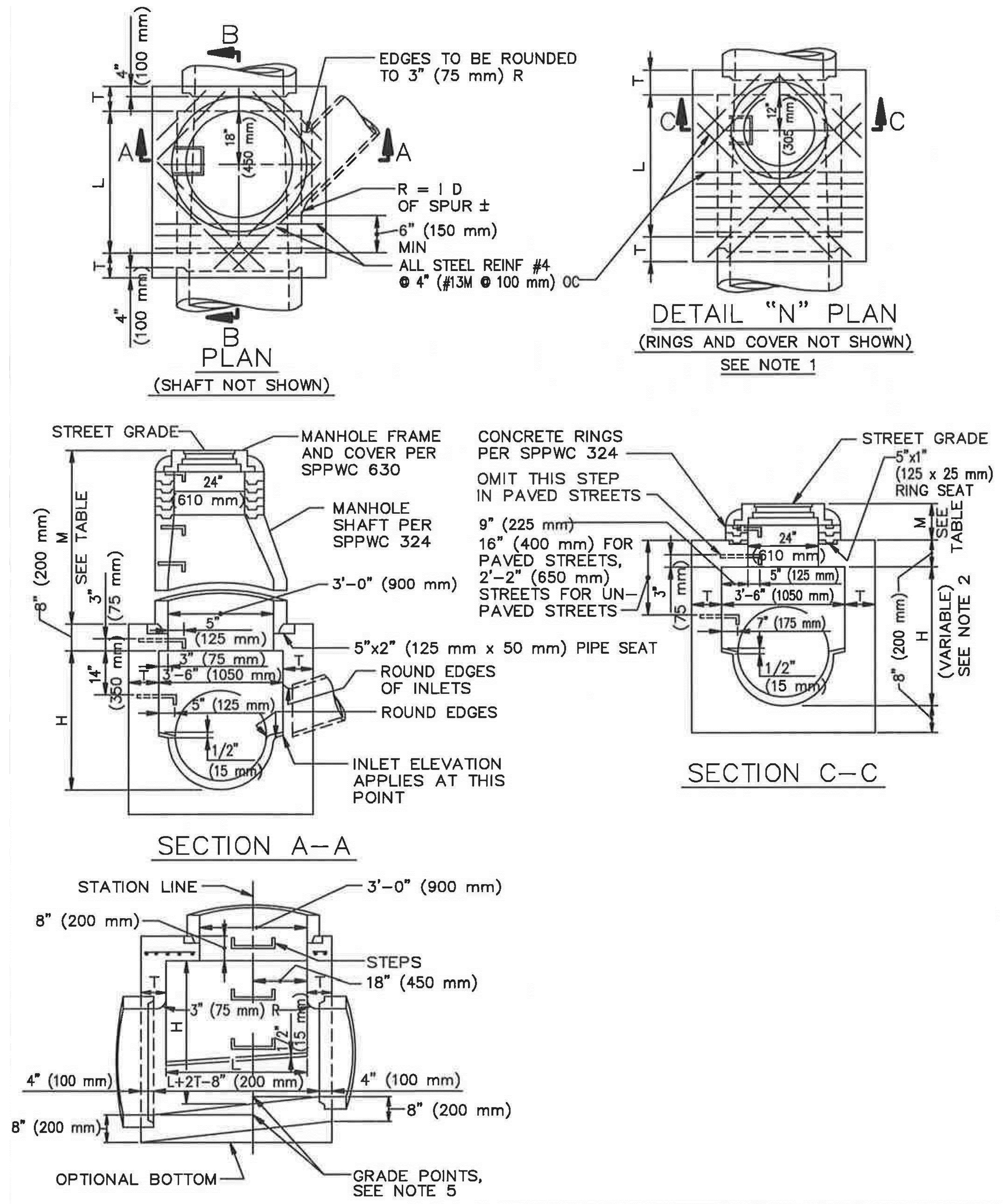


TABLE OF VALUES FOR M (SEE NOTE 1)				
SECTION	PAVED STREET		UNPAVED STREET	
	MAX	MIN	MAX	MIN
A–A		2'–10 1/2" (867 mm)		3'–6" (1060 mm)
C–C	11" (282 mm)	8 1/2" (217 mm)	16" (410 mm)	15" (380 mm)

NOTES

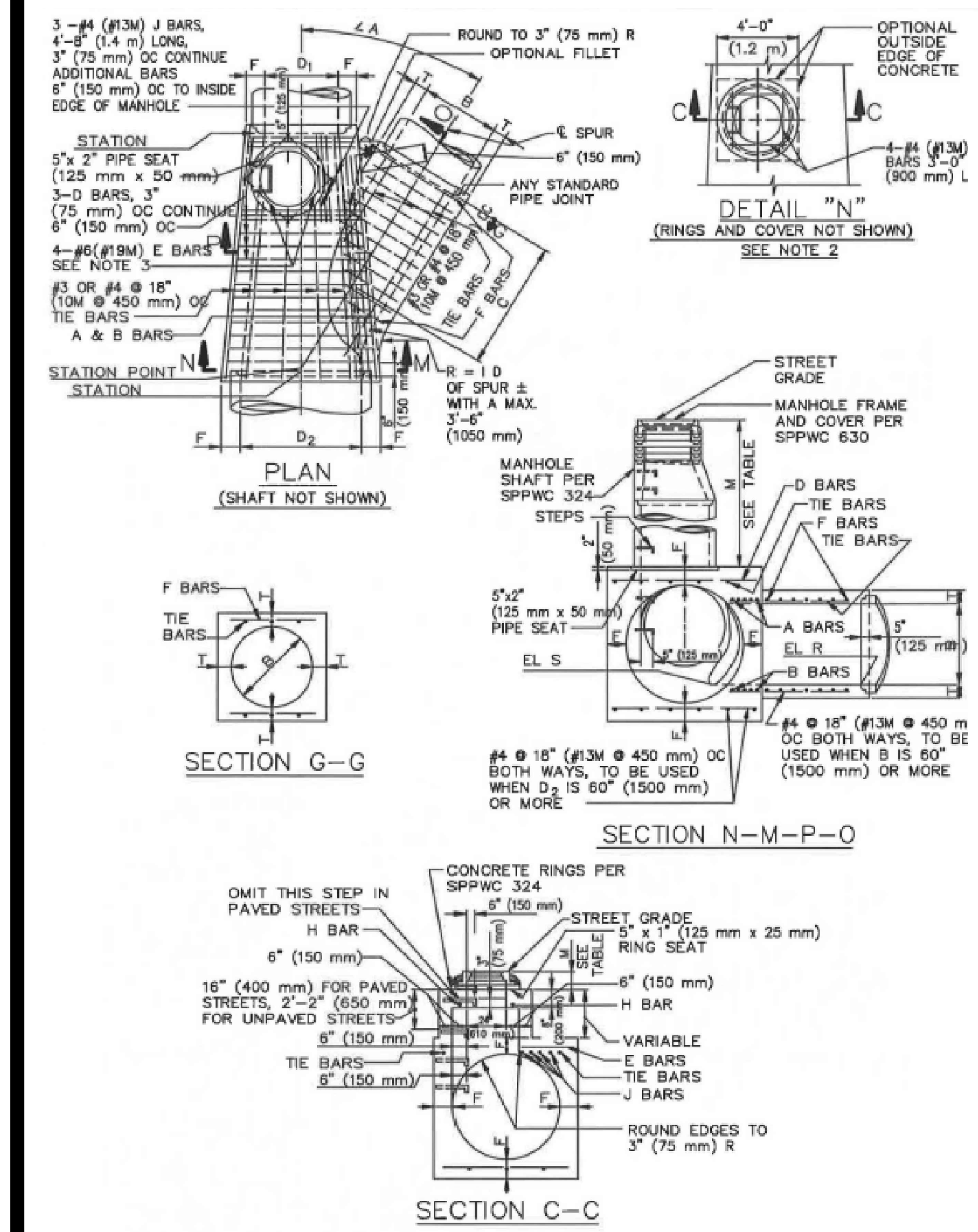
1. WHEN DEPTH M FROM STREET GRADE TO THE TOP OF THE BOX IS LESS THAN 2'–10 1/2" (867 mm) FOR PAVED STREETS OR 3'–6" (1060 mm) FOR UNPAVED STREETS, CONSTRUCT SHAFT PER SECTION C–C AND DETAIL "N". DEPTH M MAY BE REDUCED TO AN ABSOLUTE LIMIT OF 6" (150 mm) WHEN LARGER VALUES OF M WOULD REDUCE H IN SECTION C–C TO 3'–6" (1060 mm) OR LESS.
2. H (IN SECTION A–A AND B–B) SHALL NOT BE LESS THAN 4'–0" (1.2 m), BUT MAY BE INCREASED PROVIDED THAT THE VALUE OF M SHALL NOT BE LESS THAN THE MINIMUM SPECIFIED AND THAT THE REDUCER SHALL BE USED. FOR H (IN SECTION C–C) SEE NOTE 1.
3. L SHALL BE 4'–0" (1.2 m) UNLESS OTHERWISE SHOWN. L MAY BE INCREASED OR LOCATION OF MANHOLE SHIFTED TO MEET PIPE ENDS, BUT ANY CHANGE IN LOCATION OF THE SPUR MUST BE APPROVED BY THE ENGINEER.
4. T SHALL BE 8" (200 mm) FOR VALUES OF H UP TO AND INCLUDING 8'–0" (2.4 m) AND 10" (250 mm) FOR VALUES OF H OVER 8'–0" (2.4 m).
5. STATIONS OF MANHOLES SHOWN ON PLANS APPLY AT CENTERLINE OF SHAFT. ELEVATIONS ARE SHOWN AT CENTERLINE OF SHAFT AND REFER TO THE PROLONGED INVERT GRADE LINES. SEE NOTE 3.
6. REINFORCEMENT SHALL CONFORM TO ASTM A 615, GRADE 40 (ASTM A 615M, GRADE 300), AND SHALL TERMINATE 1 1/2" (40 mm) CLEAR OF CONCRETE SURFACES UNLESS OTHERWISE SHOWN.
7. FLOOR OF MANHOLE SHALL BE STEEL TROWELED TO SPRING LINE.
8. BODY OF MANHOLE SHALL BE POURED IN ONE CONTINUOUS OPERATION EXCEPT THAT A CONSTRUCTION JOINT WITH A LONGITUDINAL KEYWAY MAY BE PLACED AT SPRING LINE.
9. THICKNESS OF THE DECK SHALL VARY WHEN NECESSARY TO PROVIDE A LEVEL SEAT BUT SHALL NOT BE LESS THAN 8" (200 mm).
10. STEPS SHALL CONFORM TO SPPWC 635 OR 636. UNLESS OTHERWISE SHOWN, STEPS SHALL BE UNIFORMLY SPACED 14" (350 mm) TO 15" (375 mm) OC. THE LOWEST STEP SHALL NOT BE MORE THAN 24" (600 mm) ABOVE THE LEDGE AT THE SIDE OF THE MANHOLE.
11. THE FOLLOWING CRITERIA SHALL BE USED FOR THIS MANHOLE:
    A. MAIN LINE = 33" (825 mm) INSIDE DIAMETER OR LESS. (EXCEPTION – IF THE MAIN LINE RCP DOWNSTREAM OF THE MANHOLE IS 36" (900 mm) TO 42" (1050 mm) INSIDE DIAMETER AND THE MAIN LINE RCP UPSTREAM IS 33" (825 mm) OR LESS.) SPPWC 320 OR 322 IS NOT APPLICABLE WHERE THE MAIN LINE CONDUIT IS LESS THAN 36" (900 mm) IN DIAMETER.
    B. SEE SECTION A – A. THE MAXIMUM SIZE LATERAL THAT MAY BE CONNECTED TO THIS MANHOLE IS SUCH THAT THE DISTANCE FROM THE OUTSIDE (TOP) OF THE LATERAL TO THE BOTTOM OF THE 8" (200 mm) THICK TOP OF THE MANHOLE CHAMBER, MEASURED VERTICALLY FROM THE END OF THE RCP, SHALL BE A MINIMUM OF 6" (150 mm).
    C. IF THE SIZE OF THE LATERAL IS SUCH THAT THE ABOVE–SPECIFIED MINIMUM DISTANCES CANNOT BE MAINTAINED, THEN ONE OF THE FOLLOWING ALTERNATE SOLUTIONS MUST BE USED.
        1. PROVIDE A SPECIAL STRUCTURE.
        2. PROVIDE TWO STANDARD STRUCTURES, CONSISTING OF THIS MANHOLE PLACED UPSTREAM OR DOWNSTREAM FROM THE APPLICABLE JUNCTION STRUCTURE OR TRANSITION STRUCTURE.
12. MANHOLE FRAME AND COVER SHALL CONFORM TO SPPWC 630 UNLESS OTHERWISE SHOWN.
13. MANHOLE SHAFT SHALL CONFORM TO SPPWC 324 UNLESS OTHERWISE SHOWN.
14. WHERE A MANHOLE SHAFT – 36" (900 mm) WITHOUT REDUCER IS SPECIFIED REFER TO SPPWC 336.
15. WHERE A PRESSURE MANHOLE SHAFT – WITH ECCENTRIC REDUCER IS SPECIFIED REFER TO SPPWC 328.
16. WHERE A PRESSURE MANHOLE SHAFT – 36" (900 mm) WITHOUT REDUCER IS SPECIFIED REFER TO SPPWC 329.
17. THE FOLLOWING SPPWC ARE INCORPORATED HEREIN:
    324 MANHOLE SHAFT – WITH ECCENTRIC REDUCER
    326 MANHOLE SHAFT – 36" (900 mm) WITHOUT REDUCER
    328 PRESSURE MANHOLE SHAFT – WITH ECCENTRIC
    329 PRESSURE MANHOLE SHAFT – 36" (900 mm) WITHOUT REDUCER
    630 24" (610 mm) MANHOLE FRAME AND COVER
    633 36" (900 mm) MANHOLE FRAME AND COVER
    635 STEEL STEP
    636 POLYPROPYLENE PLASTIC STEP

- CONCRETE USED FOR UTILITY CONNECTIONS BE SPEC MIX 2000 OR APPROVED EQUAL. SEE SOILS REPORT FOR RECOMMENDATIONS.

M

STORM DRAIN MANHOLE

NOT TO SCALE



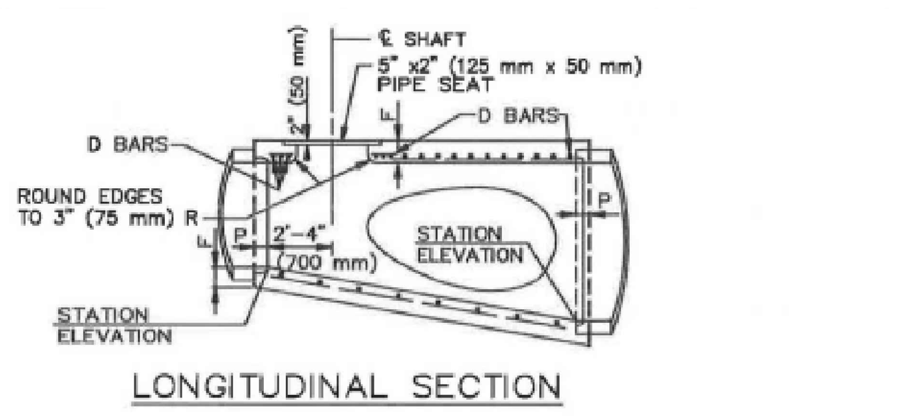


TABLE OF BARS SIZES		
D_2 OR B	A & B	D OR F
12" (300 mm)–39" (975 mm)	#5 @ 3" (#16M @ 75 mm)	#4 @ 6" (#13M @ 150 mm)
42" (1050 mm)–84" (2100 mm)	#6 @ 3" (#19M @ 75 mm)	#5 @ 6" (#16M @ 150 mm)
90" (2250 mm)–144" (3600 mm)	#7 @ 3" (#22M @ 75 mm)	#6 @ 6" (#19M @ 150 mm)

TABLE OF VALUES FOR M (SEE NOTE 2)				
SECTION	PAVED STREET		UNPAVED STREET	
	MAX	MIN	MAX	MIN
N–M–P–O		2'–10 1/2" (867 mm)		3'–6" (1060 mm)
C–C	11" (282 mm)	8 1/2" (217 mm)	16" (410 mm)	15" (380 mm)

TABLE OF VALUES FOR F	
D_2	F
36" (900 mm)	6 1/2" (165 mm)
39" (975 mm)	7" (180 mm)
42" (1050 mm)	7 1/2" (190 mm)
45" (1125 mm)	7 3/4" (195 mm)
48" (1200 mm)	8" (205 mm)
51" (1275 mm)	8 1/2" (215 mm)
54" (1350 mm)	9" (230 mm)
57" (1425 mm)	9 1/4" (235 mm)
60" (1500 mm)	9 1/2" (240 mm)
63" (1575 mm)	10" (255 mm)
66" (1650 mm)	10 1/4" (260 mm)
69" (1725 mm)	10 3/4" (275 mm)
72" (1800 mm)	11" (280 mm)
78" (1950 mm)	11 3/4" (300 mm)
84" (2100 mm)	12 1/2" (320 mm)
90" (2250 mm)	13 1/4" (335 mm)
96" (2400 mm)	14" (355 mm)
102" (2550 mm)	15 1/2" (395 mm)
108" (2700 mm)	16" (405 mm)
114" (2850 mm)	16 1/2" (420 mm)
120" (3000 mm)	17" (430 mm)
126" (3150 mm)	17" (430 mm)
132" (3300 mm)	17 1/2" (445 mm)
138" (3450 mm)	17 1/2" (445 mm)
144" (3600 mm)	18" (455 mm)

TABLE OF VALUES FOR T	
B	T
12" (300 mm)	4" (100 mm)
15" (375 mm)	4 1/4" (110 mm)
18" (450 mm)	4 1/2" (115 mm)
21" (525 mm)	5" (125 mm)
24" (600 mm)	5 1/4" (135 mm)
27" (675 mm)	5 1/2" (140 mm)
30" (750 mm)	6" (150 mm)
33" (825 mm)	6 1/4" (160 mm)
36" (900 mm)	6 1/2" (165 mm)
39" (975 mm)	7" (180 mm)
42" (1050 mm)	7 1/2" (190 mm)
45" (1125 mm)	7 3/4" (195 mm)
48" (1200 mm)	8" (205 mm)
51" (1275 mm)	8 1/2" (215 mm)
54" (1350 mm)	9" (230 mm)
57" (1425 mm)	9 1/4" (235 mm)
60" (1500 mm)	9 1/2" (240 mm)
63" (1575 mm)	10" (255 mm)
66" (1650 mm)	10 1/4" (260 mm)
69" (1725 mm)	10 3/4" (275 mm)
72" (1800 mm)	11" (280 mm)
78" (1950 mm)	11 3/4" (300 mm)
84" (2100 mm)	12 1/2" (320 mm)
90" (2250 mm)	13 1/4" (335 mm)
96" (2400 mm)	14" (355 mm)
102" (2550 mm)	15 1/2" (395 mm)
108" (2700 mm)	16" (405 mm)
114" (2850 mm)	16 1/2" (420 mm)
120" (3000 mm)	17" (430 mm)
126" (3150 mm)	17" (430 mm)
132" (3300 mm)	17 1/2" (445 mm)
138" (3450 mm)	17 1/2" (445 mm)
144" (3600 mm)	18" (455 mm)

N

STORM DRAIN JUNCTION WITH MANHOLE COVER

NOT TO SCALE

Oct 25, 2019

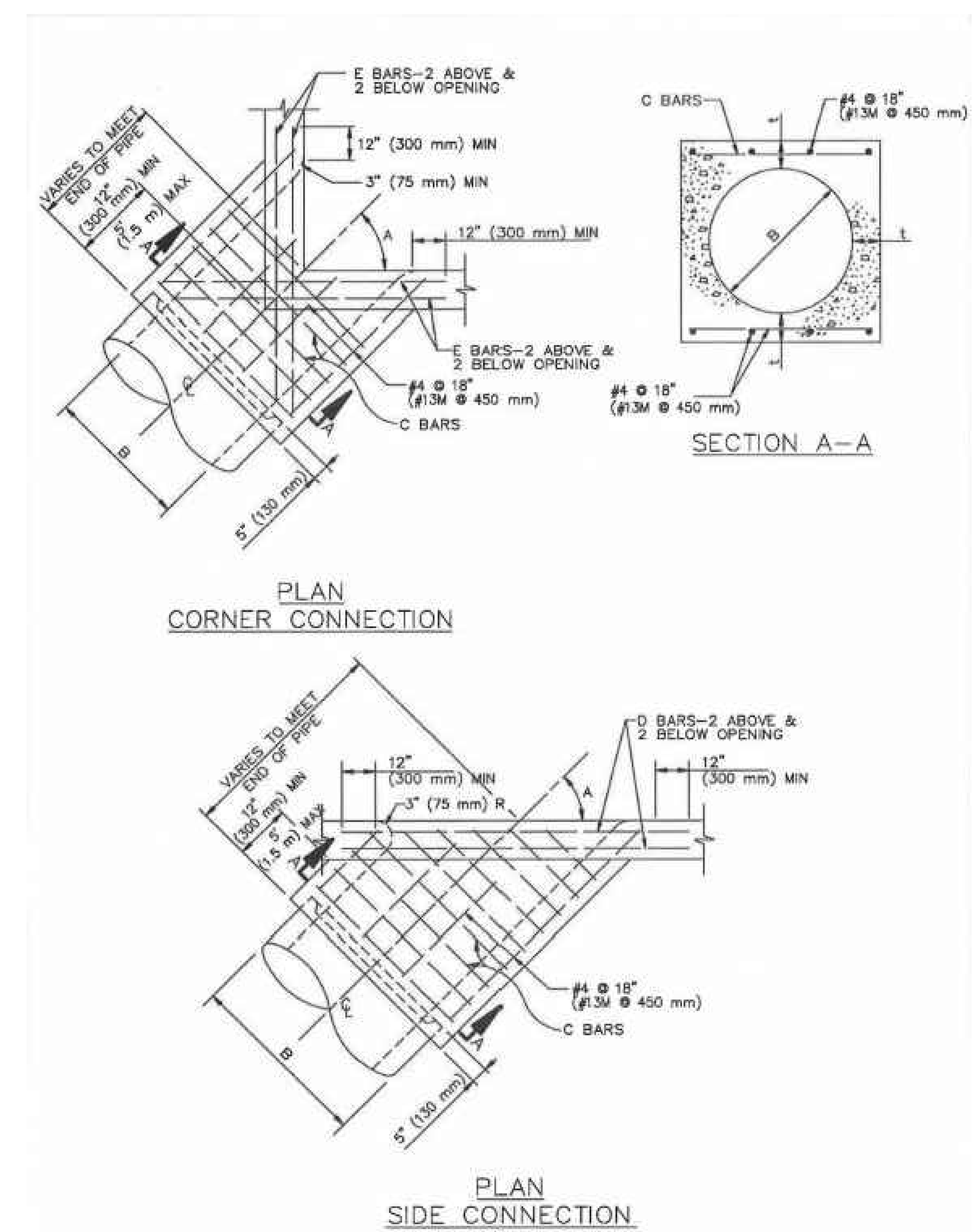
NOTES

1. VALUES FOR A, B, C, D_1, D_2, ELEVATION R AND ELEVATION S ARE SHOWN ON THE PLANS. ELEVATION S APPLIES AT INSIDE WALL OF STRUCTURE.
2. WHEN DEPTH M FROM STREET GRADE TO THE TOP OF THE BOX IS LESS THAN 2'–10 1/2" (867 mm) FOR PAVED STREETS OR 3'–6" (1060 mm) FOR UNPAVED STREETS, CONSTRUCT MONOLITHIC SHAFT PER SECTION C–C AND DETAIL "N". SHAFT FOR ANY DEPTH OF MANHOLE MAY BE CONSTRUCTED PER SECTION C–C. WHEN DIAMETER D_1 IS 48" (1200 mm) OR LESS, CENTER OF SHAFT MAY BE LOCATED PER NOTE 3.
3. CENTER OF MANHOLE SHAFT SHALL BE LOCATED OVER CENTERLINE OF STORM DRAIN WHEN DIAMETER D_1 IS 48" (1200 mm) OR LESS, IN WHICH CASE PLACE E BARS SYMMETRICALLY AROUND SHAFT AT 45° WITH CENTERLINE.
4. LENGTH OF MANHOLE MAY BE INCREASED AT OPTION TO MEET PIPE ENDS, BUT ANY CHANGE IN LOCATION OF SPUR MUST BE APPROVED BY THE ENGINEER.
5. P SHALL BE 5" (125 mm) FOR D_2=96" (2400 mm) OR LESS AND 8" (200 mm) FOR D_2 OVER 96" (2400 mm).
6. REINFORCEMENT SHALL CONFORM TO ASTM A 615, GRADE 40 (ASTM A 615M, GRADE 300), AND SHALL TERMINATE 1 1/2" (40 mm) CLEAR OF CONCRETE SURFACES UNLESS OTHERWISE SHOWN.
7. FLOOR OF MANHOLE SHALL BE STEEL TROWELED TO SPRING LINE.
8. BODY OF MANHOLE SHALL BE POURED IN ONE CONTINUOUS OPERATION EXCEPT THAT A CONSTRUCTION JOINT WITH A LONGITUDINAL KEYWAY MAY BE PLACED AT SPRING LINE.
9. THICKNESS OF THE DECK SHALL VARY WHEN NECESSARY TO PROVIDE A LEVEL SEAT BUT SHALL NOT BE LESS THAN THE TABULAR VALUES OF F SHOWN ON TABLE, SHEET 1.
10. IF LATERALS ENTER ON BOTH SIDES OF MANHOLE, SHAFT SHALL BE LOCATED ON SIDE RECEIVING THE SMALLER LATERAL.
11. STEPS SHALL CONFORM TO SPPWC 635 OR 636. UNLESS OTHERWISE SHOWN, STEPS SHALL BE UNIFORMLY SPACED 14" (350 mm) TO 15" (375 mm) OC. THE LOWEST STEP SHALL NOT BE MORE THAN 24" (600 mm) ABOVE THE INVERT.
12. THE FOLLOWING CRITERIA SHALL BE USED FOR THIS MANHOLE:
    A. THIS STANDARD PLAN IS USED WHEN SPPWC 320 IS INADEQUATE. MAIN LINE = 36" (900 mm) INSIDE DIAMETER OR LARGER.
    B. LATERAL = 12" (300 mm) TO 144" (3600 mm) INSIDE DIAMETER; HOWEVER, THE INSIDE DIAMETER SHALL NOT EXCEED THE INSIDE DIAMETER OF THE MAIN LINE.
13. MANHOLE FRAME AND COVER SHALL CONFORM TO SPPWC 630 UNLESS OTHERWISE SHOWN.
14. MANHOLE SHAFT SHALL CONFORM TO SPPWC 324 UNLESS OTHERWISE SHOWN.
15. WHERE A MANHOLE SHAFT – 36" (900 mm) WITHOUT REDUCER IS SPECIFIED REFER TO SPPWC 326.
16. WHERE A PRESSURE MANHOLE SHAFT – WITH ECCENTRIC REDUCER IS SPECIFIED REFER TO SPPWC 328.
17. WHERE A PRESSURE MANHOLE SHAFT – 36" (914 mm) WITHOUT REDUCER IS SPECIFIED REFER TO SPPWC 329.
18. THE FOLLOWING SPPWC ARE INCORPORATED HEREIN:
    324 MANHOLE SHAFT – WITH ECCENTRIC REDUCER
    326 MANHOLE SHAFT – 36" (900 mm) WITHOUT REDUCER
    328 PRESSURE MANHOLE SHAFT – WITH ECCENTRIC
    329 PRESSURE MANHOLE SHAFT – 36" (914 mm) WITHOUT REDUCER
    630 24" (610 mm) MANHOLE FRAME AND COVER
    633 36" (914 mm) MANHOLE FRAME AND COVER
    635 STEEL STEP
    636 POLYPROPYLENE PLASTIC STEP

N

STORM DRAIN JUNCTION WITH MANHOLE COVER

NOT TO SCALE



STRUCTURAL DATA							
B	t	C BARS	D&E BARS	B	t	C BARS	D&E BARS
12" (300 mm)	4" (115 mm)	#4 @ 6" (#13M @ 150 mm)	#5 (#16M)	42" (1050 mm)	7 1/2" (190 mm)	#5 @ 6" (#16M @ 150 mm)	#6 (#19M)
15" (375 mm)	4–1/4" (115 mm)			45" (1125 mm)	7 3/4" (190 mm)		
18" (450 mm)	4–1/2" (115 mm)			48" (1200 mm)	8" (215 mm)		
21" (525 mm)	5" (140 mm)			51" (1275 mm)	8 1/2" (215 mm)		
24" (600 mm)	5 1/4" (140 mm)			54" (1350 mm)	9" (240 mm)		
27" (675 mm)	5 1/2" (140 mm)			57" (1425 mm)	9 1/4" (240 mm)		
30" (750 mm)	6" (165 mm)			60" (1500 mm)	9 1/2" (240 mm)		
33" (825 mm)	6 1/4" (165 mm)			63" (1575 mm)	10" (260 mm)		
36" (900 mm)	6 1/2" (165 mm)			66" (1650 mm)	10 1/4" (260 mm)		
39" (975 mm)	7" (190 mm)			69" (1725 mm)	10 3/4" (280 mm)		
				72" (1800 mm)	11" (280 mm)		
FOR B GREATER THAN 72" (1800 mm) SEE PLANS							

NOTES

1. REINFORCING STEEL SHALL BE 1–1/2" (40 mm) CLEAR FROM FACE OF CONCRETE UNLESS OTHERWISE SHOWN.
2. REINFORCING STEEL FOR INSIDE FACE OF CATCH BASIN SHALL BE CUT AT CENTER OF OPENING AND BENT INTO WALLS OF MONOLITHIC CATCH BASIN CONNECTION. REINFORCING STEEL FOR OUTSIDE FACE OF CATCH BASIN SHALL BE CUT 2" (50 mm) CLEAR OF OPENING.
3. CONNECTION SHALL BE PLACED MONOLITHIC WITH CATCH BASIN. THE ROUNDED EDGE OF OUTLET SHALL BE CONSTRUCTED BY PLACING CONCRETE WITH THE SAME CLASS OF CONCRETE AS THE CATCH BASIN AGAINST A CURVED FORM WITH A RADIUS OF 3" (75 mm).
4. CONNECTIONS SHALL BE CONSTRUCTED WHEN:
    (A) PIPES INLET OR OUTLET THROUGH CORNER OF CATCH BASIN
    (B) ANGLE A FOR PIPES THROUGH 30" (750 mm) IN DIAMETER IS LESS THAN 70° OR GREATER THAN 110°.

- CONCRETE USED FOR UTILITY CONNECTION TO BE SPEC MIX 2000 OR APPROVED EQUAL. SEE SOILS REPORT FOR RECOMMENDATIONS.

O

MONOLITHIC CATCH BASIN CONNECTION

NOT TO SCALE

D				
C				
B				
A				
△	REVISION	DESCRIPTION	RCE / APP.	DATE

JENSEN DESIGN & SURVEY, INC.
www.jdscivil.com
1672 DONLON STREET
VENTURA, CALIF. 93003
PHONE 805/654-6977
FAX 805/654-6979
FREDERICK T. GIROUX RCE 057289 (EXP 12-31-19) DATE

DESIGNED FTG DRAWN RQ
APPROVED: COUNTY OF VENTURA
DATE:
BY:
MANAGER, DEVELOPMENT & INSPECTION SERVICES

COUNTY OF VENTURA
PUBLIC WORKS AGENCY
DEVELOPMENT SERVICES

SPEC. NO.
PROJ. NO.

IMPROVEMENT PLAN DETAILS – ROUGH GRADE
VCCCD FIRE ACADEMY, CAMARILLO
CAMARILLO, CA.

SHEET 7 OF 7
DRAWING NO.