



## Stormwater Quality

### ESC Plan Information Sheet

**Project Name:** \_\_\_\_\_

**Project Location:** (address or major cross streets/arroyo) \_\_\_\_\_

\_\_\_\_\_

**Plan Preparer Information:**

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: (O) \_\_\_\_\_ (Cell (optional)) \_\_\_\_\_

e-Mail: \_\_\_\_\_

**Owner Information:**

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

e-Mail: \_\_\_\_\_

**I am submitting the ESC plan to obtain approval for:**

\_\_\_\_ ESC Permit-Grading

\_\_\_\_ ESC Permit-Building Permit

\_\_\_\_ Work Order Construction Plans

Note: More than one item can be checked for a submittal

If you have questions, please contact Curtis Cherne, Stormwater Quality 924-3420, ccherne@cabq.gov

Rev April 2016



File Path: P:\DATA\2017\20170144\DWG\ [Plot Date: 01-30-2018  
File Name: 170144\_C-100.DWG [Plot Time: 09:43 am

DRAINAGE PLAN

I. EXECUTIVE SUMMARY AND INTRODUCTION

THE PROPOSED MARK 3S HOLLY EXPANSION DEVELOPMENT IS LOCATED WITHIN THE LA CUEVA SECTOR PLAN AREA OF NORTH ALBUQUERQUE ACRES. THE EXPANSION INCORPORATES ADDITIONAL PROPERTY WEST OF THE EXISTING DEVELOPMENT TO EXPAND THE EXISTING SCHOOL CAMPUS. THE SITE DEVELOPMENT PLANS FOR THE PROPOSED EXPANSION WERE APPROVED THROUGH EPC AND DRB AS AN AMENDMENT TO A PREVIOUSLY APPROVED PLAN. A CONCEPTUAL GRADING PLAN WAS INCLUDED IN THE EPC SET AND THIS SUBMITTAL IS CONSISTENT WITH THAT PLAN. MOST OF THE REQUIRED PUBLIC INFRASTRUCTURE IN HOLLY AVENUE NE HAS BEEN CONSTRUCTED BY PREVIOUS PROJECTS DESIGNED AND INSPECTED BY THIS ENGINEER (LOS VIGILS, VINEYARD COURT ESTATES, MARK 3S HOLLY IMPROVEMENTS). THE REMAINING PORTIONS REQUIRED FOR THIS PROJECT ARE THE PERMANENT HALF-WIDTH PAVING AND THE CONSTRUCTION OF TWO STORM INLETS. THE SITE DISCHARGES FREELY TO PUBLIC DRAINAGE IMPROVEMENTS IN HOLLY THAT WERE DESIGNED AND SIZED FOR THIS DISCHARGE. SITE RUNOFF WILL BE DIRECTED TO DEPRESSED WATER QUALITY AREAS PRIOR TO DISCHARGING TO HOLLY. CONCURRENT WITH THE DRB SITE PLAN APPROVALS, A PLATING ACTION WAS ALSO DONE TO SUPPORT THE LOT LINE. ELIMINATIONS, NEW LOTS LINES AND VACATION OF 2 FEET OF HOLLY RIGHT-OF-WAY BEING INCORPORATED INTO THE SITE. THE PURPOSE OF THIS PLAN IS TO OBTAIN BUILDING PERMIT APPROVAL.

II. PROJECT DESCRIPTION:

AS SHOWN BY VICINITY MAP C-20 LOCATED HEREON, THE SITE IS LOCATED IN THE NORTH ALBUQUERQUE ACRES SECTION OF ALBUQUERQUE, ON HOLLY AVE NE BETWEEN VENTURA ST. N.E. AND HOLBROOK STREET N.E. THE EXISTING LEGAL DESCRIPTION IS TRACT A-1 MARK 3S HOLLY DEVELOPMENT. THE SITE IS ZONED SU-2/MIXED USE AND THE PROPOSED DEVELOPMENT IS CONSISTENT WITH THE ZONING AND THE APPROVED SITE DEVELOPMENT PLANS.

AS SHOWN BY PANEL 141 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS, BERNALILLO COUNTY, NEW MEXICO, AND INCORPORATED AREAS, DATED SEPTEMBER 26, 2008, THE SITE DOES NOT LIE WITHIN THE VICINITY OF ANY DESIGNATED FLOOD HAZARD ZONES.

III. BACKGROUND DOCUMENTS

THE FOLLOWING IS A LIST OF DOCUMENTS RELATED TO THE SITE AND SURROUNDING AREA. THIS LIST MAY NOT BE INCLUSIVE, HOWEVER, REPRESENTS A SUMMARY OF RELEVANT PLANS AND DOCUMENTS WHICH ARE KNOWN TO THE ENGINEER AT THE TIME OF PLAN PREPARATION.

- A. THE "NORTH AND SOUTH DOMINGO BACA ARROYO AND PASEO DEL NORTE CORRIDOR DRAINAGE MANAGEMENT PLAN" PREPARED FOR AMAFCA BY RESOURCE TECHNOLOGY, INC. (RTI) DATED DECEMBER, 1991. THIS PLAN HAS BEEN ADOPTED BY AMAFCA AS A GUIDELINE FOR DRAINAGE MANAGEMENT WITHIN THIS AREA WHICH INCLUDES THE NORTH DOMINGO BACA ARROYO (NDBA). AMAFCA RESOLUTION 1992-3 DATED JANUARY 03, 1992 FORMALLY ADOPTED THIS PLAN WHICH IDENTIFIES THE EXTENSION OF PERMANENT DRAINAGE IMPROVEMENTS WITHIN THE NDBA CORRIDOR, AND ESTABLISHED DEVELOPED DRAINAGE BASIN BOUNDARIES WITHIN THE PLAN AREAS. AS SHOWN BY THIS PLAN, THIS SITE IS IDENTIFIED TO DRAIN TO PUBLIC STORM DRAIN IMPROVEMENTS CONSTRUCTED WITHIN THE HOLLY RIGHT-OF-WAY.
- B. REQUEST FOR LETTER OF MAP REVISION (LOMR) FOR THE NORTH DOMINGO BACA ARROYO CARMEL AVENUE STORM DRAIN EXTENSION PREPARED BY JMA DATED 12/08/2003 AND APPROVED BY FEMA 03/23/2004 (FEMA CASE NUMBER 04-06-671P). THIS LOMR SUPPORTS THE COMPLETED NORTH DOMINGO BACA ARROYO CARMEL AVENUE STORM DRAIN EXTENSION COST SHARE PROJECT BY AMAFCA. UPON FEMA APPROVAL, AND IT REMOVED THE ASSOCIATED FLOODPLAIN DESIGNATION FROM THE NDBA WEST OF A POINT MIDBLOCK BETWEEN HOLBROOK STREET AND EUBANK.
- C. DRAINAGE REPORT FOR "LOS VIGILS SUBDIVISION" BY HIGH MESA CONSULTING GROUP FORMERLY KNOWN AS JEFF MORTENSEN & ASSOCIATES, INC. DATED 12/31/2002, HYDROLOGY FILE C20/D41. THIS PLAN THE CONSTRUCTION OF A 45 LOT RESIDENTIAL SUBDIVISION LOCATED TO THE NORTH OF THIS PROJECT ON THE NORTH SIDE OF HOLLY. THE LOS VIGILS PROJECT EXTENDED THE HOLLY STORM DRAIN ACROSS THE FRONTAGE OF THIS SITE AND DESIGNED THE REQUIRED INLETS ON THE SOUTH SIDE WHICH MUST NOW BE CONSTRUCTED. A BASIN MAP, STREET HYDRAULICS AND STORM DRAIN HYDRAULICS ANALYSIS WERE INCLUDED IN THIS SUBMITTAL TO ADDRESS THE EXTENSION OF HOLLY TO HOLBROOK ALL DEVELOPMENT ON HOLLY, INCLUDING THIS SITE.
- D. GRADING PLAN FOR "DESERT RIDGE OFFICE PARK" BY JMA, HYDROLOGY FILE C20/D51. THIS PLAN WAS APPROVED FOR THE UPSTREAM SITE IMMEDIATELY TO THE EAST (PROJECT # 1003277).
- E. DRAINAGE REPORT FOR "VINEYARD COURT ESTATES" BY HIGH MESA CONSULTING GROUP FORMERLY KNOWN AS JEFF MORTENSEN & ASSOCIATES, INC. DATED 08/21/2003. THIS PLAN WAS FOR THE CONSTRUCTION OF A 45 LOT RESIDENTIAL SUBDIVISION LOCATED TO THE NORTHEAST OF THIS PROJECT ON THE NORTH SIDE OF HOLLY. THE VINEYARD COURT ESTATES PROJECT EXTENDED THE HOLLY STORM DRAIN AND STREET IMPROVEMENTS ACROSS ITS FRONTAGE. A BASIN MAP, STREET HYDRAULICS AND STORM DRAIN HYDRAULICS ANALYSIS WERE INCLUDED IN THIS SUBMITTAL TO ADDRESS THE EXTENSION OF HOLLY TO HOLBROOK AND ALL DEVELOPMENT ON HOLLY, INCLUDING THIS SITE.
- F. GRADING AND DRAINAGE PLANS FOR MARK 3S HOLLY DEVELOPMENT BY HIGH MESA CONSULTING GROUP FORMERLY KNOWN AS JEFF MORTENSEN & ASSOCIATES, INC. DATED 05/11/2015. THIS PLAN FOLLOWED THE DRAINAGE OF FREE DISCHARGE TO THE PERMANENT FULLY HOLLY PAVING AND STORM DRAINAGE IMPROVEMENTS WHICH IS CONSISTENT WITH PREVIOUSLY APPROVED PLANS FOR NDBA DEVELOPMENT WHICH INCLUDES THIS SITE. THE DRAINAGE CONCEPTS PRESENTED THEREIN WILL BE CONSISTENT WITH THOSE NOW PROPOSED.

THE PROPOSED CONSTRUCTION DRAINING DIRECTLY AND FREELY TO PERMANENT HOLLY AVENUE NE DRAINAGE IMPROVEMENTS AS PROPOSED AND DESCRIBED HEREIN IS IN ACCORDANCE WITH THE POLICIES AND REQUIREMENTS OF THE ABOVE LISTED DOCUMENTS, AND IS CONSISTENT WITH THE CONCEPTS PREVIOUSLY ESTABLISHED BY THE CITY AND AMAFCA FOR NDBA DEVELOPMENT.

IV. EXISTING CONDITIONS:

THE DEVELOPMENT TO BE EXPANDED IS CURRENTLY DEVELOPED AS A MONTESSORI SCHOOL WITH PAVED PARKING, UTILITY AND LANDSCAPING IMPROVEMENTS. THE ADJACENT LOT TO BE EXPANDED INTO WAS PREVIOUSLY DEVELOPED INTO A LANDSCAPING BUSINESS. EXISTING RUNOFF FOR BOTH SITES DRAIN TO HOLLY AVE NE TO EXISTING DOWNSTREAM PUBLIC STORM DRAIN FACILITIES THAT WERE CONSTRUCTED BY LOS VIGILS AND THE PREVIOUS MARK 3S HOLLY DEVELOPMENT (REF. C & H). HOLLY AVE NE TO THE NORTH IS A PUBLIC STREET WITH HALF-WIDTH (NORTH) PERMANENT PAVING IMPROVEMENTS. THE UPSTREAM SECTION OF HOLLY HAS PERMANENT FULL WIDTH IMPROVEMENTS. CONSTRUCTED BY VINEYARD COURT ESTATES, CPN 718781. PASEO DEL NORTE TO THE SOUTH IS A FULLY DEVELOPED PUBLIC STREET WITH A DRAINAGE DITCH, PUBLIC STORM DRAIN, AND PAVED ASPHALT TRAIL.

OFFSITE FLOWS DO NOT ENTER THE SITE FROM THE DEVELOPED SITE TO THE EAST OR FROM THE PUBLIC STREETS TO THE NORTH AND SOUTH WHICH EXHIBIT PARALLEL TOPOGRAPHY. THE UNDEVELOPED SITE TO THE WEST IS TOPOGRAPHICALLY LOWER AND INCAPABLE OF CONTRIBUTING OFFSITE FLOWS.

V. DEVELOPED CONDITIONS

THE PROPOSED IMPROVEMENTS CONSIST OF DEMOLITION AND REMOVAL OF EXISTING LANDSCAPING BUSINESS TO ALLOW FOR EXPANSION OF CURRENT MONTESSORI SCHOOL CAMPUS. THE EXPANSION WILL INCLUDE A NEW INFANT DAYCARE BUILDING WITH PAVED PARKING, UTILITY, AND LANDSCAPING IMPROVEMENTS. THE SITE WILL CONTINUE TO DISCHARGE FREELY INTO HOLLY AVE NE. PRIOR TO DISCHARGING OFF SITE, RUNOFF WILL BE DIRECTED TO LANDSCAPED AREAS DEPRESSED TO THE MAXIMUM EXTENT POSSIBLE TO RETAIN 670 CF OF THE 1020 CF OF REQUIRED FOR THE 80TH PERCENTILE FIRST FLUSH FOR WATER QUALITY AND ROOF DRAINAGE WILL BE PIPED TO A DIRECT STORM DRAIN CONNECTION BUT WILL FIRST BE ROUTED THROUGH A STORM WATER QUALITY MANHOLE TO TREAT FIRST FLUSH.

AS DEMONSTRATED BY THE STREET HYDRAULIC, STORM DRAIN AND INLET CALCULATIONS AND ANALYSIS CONTAINED WITHIN THE DRAINAGE REPORTS FOR LOS VIGILS AND VINEYARD COURT ESTATES, THE HOLLY STORM DRAIN AND STREET IS DESIGNED TO ACCEPT THE FREE DISCHARGE OF FULLY DEVELOPED RUNOFF FROM THE PROPERTIES FRONTING ON HOLLY, INCLUDING THIS SITE. ALL IMPROVEMENTS PROPOSED HEREIN ARE CONSISTENT WITH THE PREVIOUSLY APPROVED DEVELOPMENT PLANS FOR THIS SECTION OF HOLLY.

VI. GRADING PLAN

THE GRADING PLAN SHOWS: 1) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1 FT INTERVALS FROM THE HMCG TOPO SURVEY DATED 01/10/2017 & 05/16/2017, 2) PROPOSED GRADES INDICATED BY FINISHED FLOOR ELEVATIONS, SPOT ELEVATIONS, AND CONTOURS AT 1 FT INTERVALS, 3) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS, 4) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 5) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES.

VII. CALCULATIONS

THE CALCULATIONS, REPRODUCED FORM THE APPROVED CONCEPTUAL GRADING PLAN AND WHICH APPEAR HEREON, ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS DEMONSTRATED BY THE LOMR AND APPROVED DRAINAGE REPORTS PREPARED BY THIS OFFICE TO SUPPORT THE CONSTRUCTED AMAFCA NDBA PROJECT AND FOR LOS VIGILS, VINEYARD COURT ESTATES, AND THE DESERT RIDGE OFFICE PARK PROJECT (SEE REFERENCES), THE PUBLIC STORM DRAIN IN HOLLY IS SIZED FOR FREE DISCHARGE OF FULLY DEVELOPED RUNOFF FROM THIS SITE.

IX. CONCLUSION

1) THE PROPOSED SITE IMPROVEMENTS AND DRAINAGE CONCEPT ARE CONSISTENT WITH THE DEVELOPMENT CRITERIA ESTABLISHED BY PREVIOUSLY APPROVED PLANS FOR NDBA DEVELOPMENT AND THIS SPECIFIC PROJECT. 2) DEVELOPED RUNOFF FROM THIS SITE WILL DRAIN FREELY TO PERMANENT PUBLIC HOLLY PAVING AND STORM DRAINAGE IMPROVEMENTS, WHICH WERE CONSTRUCTED FOR LOS VIGILS AND VINEYARD COURT ESTATES. 3) THERE ARE NO DPM DESIGN VARIANCES, DRAINAGE EASEMENTS OR DRAINAGE COVENANTS ANTICIPATED AT THIS TIME.

CALCULATIONS

I. SITE CHARACTERISTICS

- A. PRECIPITATION ZONE = 3
- B.  $P_{0.100} = P_{300} = 2.60$

C. TOTAL PROJECT AREA (A <sub>T</sub> )	108,525 SF
	2.49 AC

D. LAND TREATMENTS

1. EXISTING LAND TREATMENT

a. BASIN A	AREA (SF/AC)		
Total Area	57,025	1.31	%
Treatment A Area			
Treatment B Area			
Treatment C Area	42,769	0.98	75
Treatment D Area	14,256	0.33	25

b. BASIN B	AREA (SF/AC)		
Total Area	51,500	1.18	%
Treatment A Area			
Treatment B Area	5,150	0.12	10
Treatment C Area	5,150	0.12	10
Treatment D Area	41,200	0.95	80

2. DEVELOPED LAND TREATMENT

a. BASIN A	AREA (SF/AC)		
Total Area	57,025	1.31	%
Treatment A Area			
Treatment B Area			
Treatment C Area	5,703	0.13	10
Treatment D Area	51,323	1.18	90

b. BASIN B	AREA (SF/AC)		
Total Area	51,500	1.18	%
Treatment A Area			
Treatment B Area			
Treatment C Area	15,450	0.35	30
Treatment D Area	36,050	0.83	70

II. HYDROLOGY

A. EXISTING CONDITION

1. BASIN A

a. VOLUME

$$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$
$$E_w = ((0.00 * 0.66) + (0.00 * 0.92) + (0.98 * 1.29) + (0.33 * 2.36)) / 1.31 = 1.56 \text{ IN}$$
$$V_{100} = (E_w / 12) A_T = (1.56 / 12) 1.31 = 0.1703 \text{ AC-FT} = 7,420 \text{ CF}$$

b. PEAK DISCHARGE

$$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$
$$Q_p = Q_{100} = ((0.00 * 1.87) + (0.00 * 2.6) + (0.98 * 3.45) + (0.33 * 5.02)) = 5.0 \text{ CFS}$$

2. BASIN B

a. VOLUME

$$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$
$$E_w = ((0.00 * 0.66) + (0.12 * 0.92) + (0.12 * 1.29) + (0.95 * 2.36)) / 1.18 = 2.11 \text{ IN}$$
$$V_{100} = (E_w / 12) A_T = (2.11 / 12) 1.18 = 0.2075 \text{ AC-FT} = 9,040 \text{ CF}$$

b. PEAK DISCHARGE

$$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$
$$Q_p = Q_{100} = ((0.00 * 1.87) + (0.12 * 2.6) + (0.12 * 3.45) + (0.95 * 5.02)) = 5.5 \text{ CFS}$$

B. DEVELOPED CONDITION

1. BASIN A

a. VOLUME

$$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$
$$E_w = ((0.00 * 0.66) + (0.00 * 0.92) + (0.13 * 1.29) + (1.18 * 2.36)) / 1.31 = 2.25 \text{ IN}$$
$$V_{100} = (E_w / 12) A_T = (2.25 / 12) 1.31 = 0.2456 \text{ AC-FT} = 10,700 \text{ CF}$$

b. PEAK DISCHARGE

$$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$
$$Q_p = Q_{100} = ((0.00 * 1.87) + (0.00 * 2.6) + (0.13 * 3.45) + (1.18 * 5.02)) = 6.4 \text{ CFS}$$

2. BASIN B

a. VOLUME

$$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$
$$E_w = ((0.00 * 0.66) + (0.00 * 0.92) + (0.35 * 1.29) + (0.83 * 2.36)) / 1.18 = 2.04 \text{ IN}$$
$$V_{100} = (E_w / 12) A_T = (2.04 / 12) 1.18 = 0.2006 \text{ AC-FT} = 8,740 \text{ CF}$$

b. PEAK DISCHARGE

$$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$
$$Q_p = Q_{100} = ((0.00 * 1.87) + (0.00 * 2.6) + (0.35 * 3.45) + (0.83 * 5.02)) = 5.4 \text{ CFS}$$

C. COMPARISON

1. BASIN A

a. VOLUME

$$\Delta V_{100} = 10,700 - 7,420 = 3280.00 \text{ CF}$$
$$\Delta Q_{100} = 6.4 - 5.0 = 1.40 \text{ CFS}$$

b. PEAK DISCHARGE

$$\Delta Q_{100} = 6.4 - 5.0 = 1.40 \text{ CFS}$$
$$\Delta Q_{100} = 6.4 - 5.0 = 1.40 \text{ CFS}$$

2. BASIN B

a. VOLUME

$$\Delta V_{100} = 8,740 - 9,040 = -300.00 \text{ CF}$$
$$\Delta Q_{100} = 5.4 - 5.5 = -0.10 \text{ CFS}$$

b. PEAK DISCHARGE

$$\Delta Q_{100} = 5.4 - 5.5 = -0.10 \text{ CFS}$$
$$\Delta Q_{100} = 5.4 - 5.5 = -0.10 \text{ CFS}$$

D. FIRST FLUSH CALCULATIONS

1. BASIN A RETENTION REQUIREMENT

a. VOLUME

$$V_{REQ} = ((P_{FF} - I_{A0}) / 12) A_{D0}$$
$$V_{REQ} = ((0.26 - 0.10) / 12) (40262.5) = 540 \text{ CF}$$

2. BASIN B RETENTION REQUIREMENT

$$V_{REQ} = ((P_{FF} - I_{A0}) / 12) A_{D0}$$
$$V_{REQ} = ((0.26 - 0.10) / 12) (36050.00) = 480 \text{ CF}$$

$$3. \text{ WATER QUALITY PONDING PROVIDED ONSITE (BASED ON AVERAGE END AREA METHOD)}$$
$$BASIN A V_{CAP} = 565 \text{ CF}$$

$$BASIN B V_{CAP} = 105 \text{ CF}$$

E. BASIN A RUNDOWN OVERFLOW CALCULATIONS

$$Q_{REQ} = 6.4 \text{ CFS}$$
$$Q_{CAP} = C^* L^* H^{3/2}$$
$$C = 3.0, L = 4 \text{ FT}, H = 0.67 \text{ FT (8" CURB)}$$
$$Q_{CAP} = 3.0 * 4 * 0.67^{3/2}$$
$$Q_{CAP} = 6.58 \text{ CFS} > Q_{REQ} = 6.4 \text{ CFS}$$

LEGEND

AC	ASPHALT CURB	FL	FLOWLINE
AL	AREA LIGHT	INV	INVERT
BBC	BRICK BUILDING COLUMN	MC	MOTORCYCLE SPACES
BCSW	BURIED CONCRETE SIDEWALK	TA	TOP OF ASPHALT PAVEMENT
BTM	BOTTOM	TC	TOP OF CURB
C&G	CURB AND CUTTER	TG	TOP OF GRATE
CF	LANDSCAPING CRUSHER FINES	+ 95.05	EXISTING SPOT ELEVATION
CM	POURED CONCRETE MOUND	89.00	PROPOSED SPOT ELEVATION
CMU	CONCRETE MASONRY UNIT WALL	...	EXISTING FLOWLINE
CND	ELECTRIC CONDUIT	...	PROPOSED FLOWLINE
CNC	CONCRETE	-5590-	EXISTING CONTOUR
CRW	CMU RETAINING WALL	-92-	PROPOSED CONTOUR
CSW	CONCRETE SIDEWALK	←	EXISTING DIRECTION OF FLOW
DYS	PAINTED DOUBLE YELLOW TRAFFIC STRIPE	←	PROPOSED DIRECTION OF FLOW
E/PM	ELECTRIC LINE BY PAINT MARK	---	RIGHT OF WAY LINE
EM	EDGE OF ASPHALT	---	PUBLIC EASEMENT LINE
EA	ELECTRIC METER	↑ ↓	HIGH POINT / DIVIDE
EO	ELECTRIC OUTLET	○	EXISTING STORM DRAIN MANHOLE
FH	FIRE HYDRANT	●	EXISTING FIRE HYDRANT
FL	FLOWLINE	○	EXISTING SANITARY SEWER MAN HOLE
G/PM	GAS LINE BY PAINT MARK	○	SANITARY SEWER MAN HOLE
GA	GATE	⊗	EXISTING VALVE BOX
GRV	LANDSCAPING GRAVEL	⊗	PROPOSED VALVE BOX
GTS	GATE STOP POST	⊗	EXISTING DOUBLE CLEANOUT
GW	GUY WIRE ANCHOR	⊗	PROPOSED DOUBLE CLEANOUT
GWAP	GUY WIRE ANCHOR POLE	⊗	EXISTING SINGLE CLEANOUT
INV	PIPE INVERT	⊗	PROPOSED SINGLE CLEANOUT
IVB	IRRIGATION VALVE BOX	⊗	EXISTING WATER SERVICE
KSW	KEYSTONE WALL	⊗	PROPOSED WATER SERVICE
LS	LANDSCAPING IMPROVEMENTS	⊗	EXISTING WATER LINE
LSD	LANDSCAPING DIVIDER	⊗	PROPOSED WATER LINE
MED	MEDIAN	⊗	EXISTING SANITARY SEWER LINE
MH	MANHOLE	⊗	PROPOSED SANITARY SEWER LINE
MLP	METAL LIGHT POLE	⊗	EXISTING FIRE LINE
OHC(1)	OVERHEAD COMMUNICATION (# OF LINES)	⊗	PROPOSED FIRE LINE
OHE(1)	OVERHEAD ELECTRIC (3 OF LINES)	⊗	EXISTING POST INDICATOR VALVE
OHO(2)	OVERHEAD GUY WIRE (# OF LINES)	⊗	PROPOSED POST INDICATOR VALVE
PG	PIPE GATE	⊗	LOT LINE
PS	PAINTED PARKING STALL STRIPE	⊗	PROPOSED BASIN BOUNDARY
PVC	POLYVINYL CHLORIDE PIPE	⊗	PROPOSED CONCRETE
RC	REINFORCED CONCRETE PIPE	⊗	PROPOSED ASPHALT PAVING
ROO	ROOT OVERHANG	⊗	
RR	LANDSCAPING RIVER ROCK	⊗	
RRT	LANDSCAPING RAILROAD TIES	⊗	
SAS	SANITARY SEWER	⊗	
SAS/PM	SANITARY SEWER BY PAINT MARK	⊗	
SB	PAINTED TRAFFIC STOP BAR	⊗	
SD/PM	STORM DRAIN BY PAINT MARK	⊗	
SDI	STORM DRAIN INLET	⊗	
SDMH	STORM DRAIN MANHOLE	⊗	
SDP	SERVICE DROP POLE	⊗	
SF	SILT FENCE (IN POOR CONDITION)	⊗	
SGN	CMU SIGN	⊗	
SLGT	SLIDING GATE	⊗	
SLP	STEEL POLE	⊗	
SP	SEPTIC TANK COVER	⊗	
STC	STONE SIGN ON STUCCO WALL	⊗	
STS	STUCCO WALL	⊗	
STW	PAINTED SOLID WHITE TRAFFIC STRIPE	⊗	
SWS	PAINTED SOLID YELLOW TRAFFIC STRIPE	⊗	
SYD	TOP OF ASPHALT	⊗	
TA	TOP OF CURB	⊗	
TCO	TOP OF CONCRETE	⊗	
TG	TOP OF GRATE	⊗	
TW	TOP OF WALL	⊗	
TYP	TYPICAL	⊗	
UPT	POSSIBLE UNDERGROUND PROPANE TANK	⊗	
VG	CONCRETE VALLEY GUTTER	⊗	
W/PM	WATER LINE BY PAINT MARK	⊗	
WCR	CONCRETE WHEELCHAIR RAMP	⊗	
WLF	WOOD LIGHT POLE	⊗	
WLP	WOOD METER BOX	⊗	
WPP	WOOD POWER POLE	⊗	
WVB	WATER VALVE BOX	⊗	
WVC	WOOD VALVE BOX	⊗	
XC	EXTRUDED CONCRETE CURB	⊗	
1.0" Ø	TREE TRUNK DIAMETER	⊗	

CONIFEROUS TREE

SMALL CONIFEROUS TREE

DECIDUOUS TREE

SMALL DECIDUOUS TREE

SHRUB

SMALL SHRUB

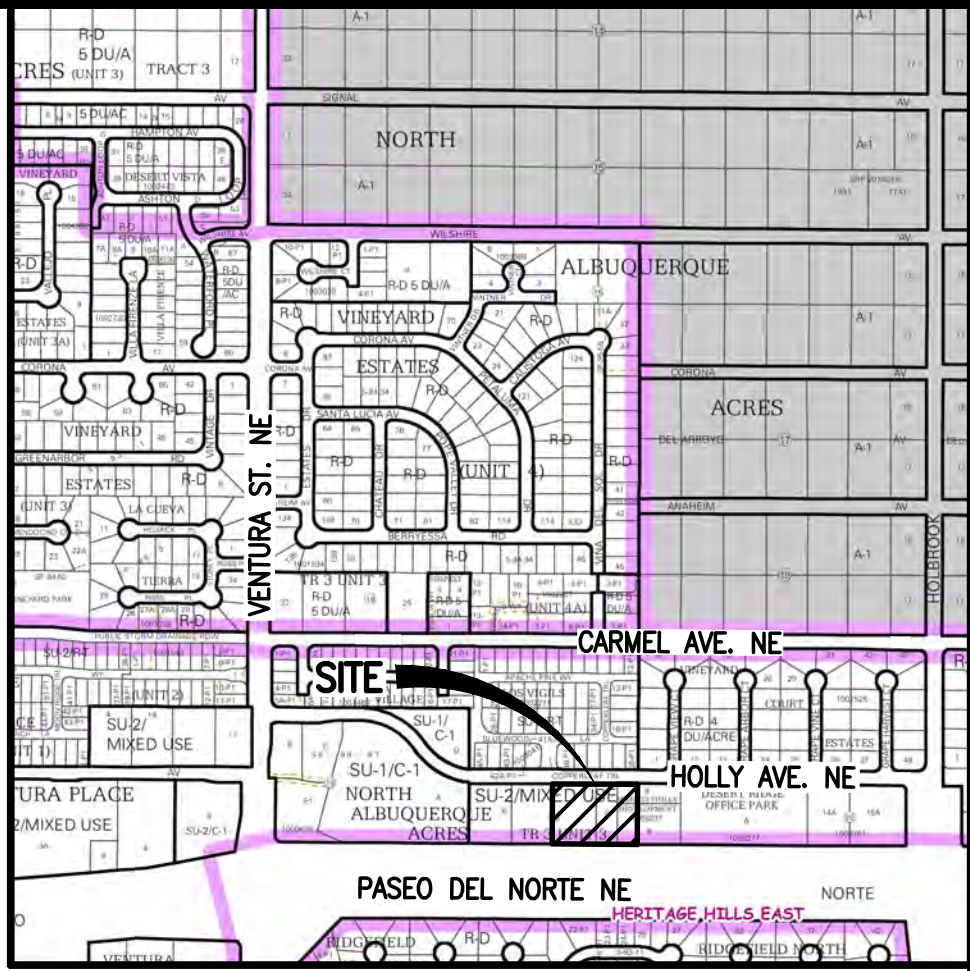
YUCCA

LANDSCAPING BOULDER

PAINTED UTILITY LINE MARK

INDEX OF DRAWINGS

SHEET	DESCRIPTION
C-100	DRAINAGE PLAN, CALCULATIONS, VICINITY MAP, LEGEND AND INDEX OF DRAWINGS
C003	PREVIOUSLY CERTIFIED GRADING PLAN (FOR INFORMATION ONLY)
CG-101	GRADING AND DRAINAGE PLAN
CU-101	WATER AND SANITARY SEWER PLAN
CP-501	PAVING SECTIONS AND DETAILS
CU-501	WATER AND SANITARY SECTIONS AND DETAILS
ESC-101	EROSION AND SEDIMENT CONTROL PLAN
ESC-102	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS



VICINITY MAP C-20  
SCALE: 1" = 500'





CONSTRUCTION NOTES

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR DESIGNATION (LINE-SPOTTING) OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
5. UTILITY INFORMATION SHOWN HEREON IS BASED UPON ONSITE SURFACE EVIDENCE, REVIEW OF AVAILABLE ABCWUA AND CITY OF ALBUQUERQUE RECORD DRAWINGS AND DISTRIBUTION MAPS AND UTILITY LINE-SPOTS PROVIDED BY HIGH MESA CONSULTING GROUP (2016.059.1 AND 2016.059.2). IN ADDITION, UTILITY LINE-SPOTS WERE REQUESTED VIA THE NEW MEXICO ONE CALL SERVICE (TICKET NOS. 16DE200007 AND 17AP210205). UTILITY LINES THAT APPEAR ON THESE DRAWINGS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE. THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
6. THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.
7. THE GRADES INDICATED ON THIS PLAN ARE FINISHED GRADES UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LEAVING SUBGRADE AT ELEVATIONS THAT SHALL ACCOMMODATE PROPOSED IMPROVEMENTS AS INDICATED ON THE PLANS INCLUDING, BUT NOT LIMITED TO, SURFACE DRAINAGE STRUCTURES, PAVING AND LANDSCAPING SURFACING.
8. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
9. BACKFILL COMPACTION SHALL BE ACCORDING TO MAJOR LOCAL STREET USE.
10. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR EARTHWORK REQUIREMENTS, AS APPLICABLE.
11. CONTRACTOR SHALL TEST SUBGRADE R-VALUE PRIOR TO CONSTRUCTION. IN THE EVENT THE R-VALUE IS LESS THAN 50, CONTRACTOR SHALL REMOVE 2 FT. OF SUBGRADE MATERIAL AND IMPORT SUITABLE MATERIAL WITH R-VALUE 50 OR GREATER.

EROSION AND SEDIMENT CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. SPOILS FROM THE PROJECT SHALL NOT BE DEPOSITED OR STORED IN THE STREET OR ROADWAY.
4. SPOILS SHALL BE STAGED ON THE UPSTREAM SIDE OF TRENCHES WHEN TRENCHING IS REQUIRED.
5. THE CONTRACTOR SHALL CLEAN AND REMOVE ALL FUGITIVE DUST, SOIL AND DEBRIS RESULTING FROM THIS PROJECT FROM THE STREET AT THE END OF EACH DAY.
6. CONTRACTOR SHALL LEAVE THE AREA IMMEDIATELY BEHIND THE CURB DEPRESSED TO CONTAIN NUISANCE FLOWS AND SEDIMENT.
7. CONCRETE TRUCKS SHALL BE SENT BACK TO THE PLANT FOR WASHING; THE WASHING OF CONCRETE TRUCKS SHALL NOT BE PERMITTED WITHIN THE PUBLIC RIGHT-OF-WAY.
8. WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.
9. UNLESS FINAL STABILIZATION IS OTHERWISE PROVIDED FOR, ANY AREAS OF EXCESS DISTURBANCE (TRAFFIC ACCESS, STORAGE YARD, EXCAVATED MATERIAL, ETC.) SHALL BE RE-SEEDING ACCORDING TO CITY OF ALBUQUERQUE SPECIFICATION 1012 "MISCELLANEOUS SEEDING". THIS WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION; THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
10. PROTECT EXISTING STORM DRAIN FACILITIES FROM SEDIMENT AS REQUIRED.

LEGEND

	EXISTING FENCE
	SILT FENCE
	PROPOSED SILT FENCE INLET PROTECTION
	PROPOSED FILTER SOCK
	EXISTING DIRECTION OF FLOW
	PROPOSED DIRECTION OF FLOW
	GRAPHIC POINT OF DISCHARGE
	PROPOSED GRAPHIC POINT OF DISCHARGE
	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED CONSTRUCTION ENTRANCE

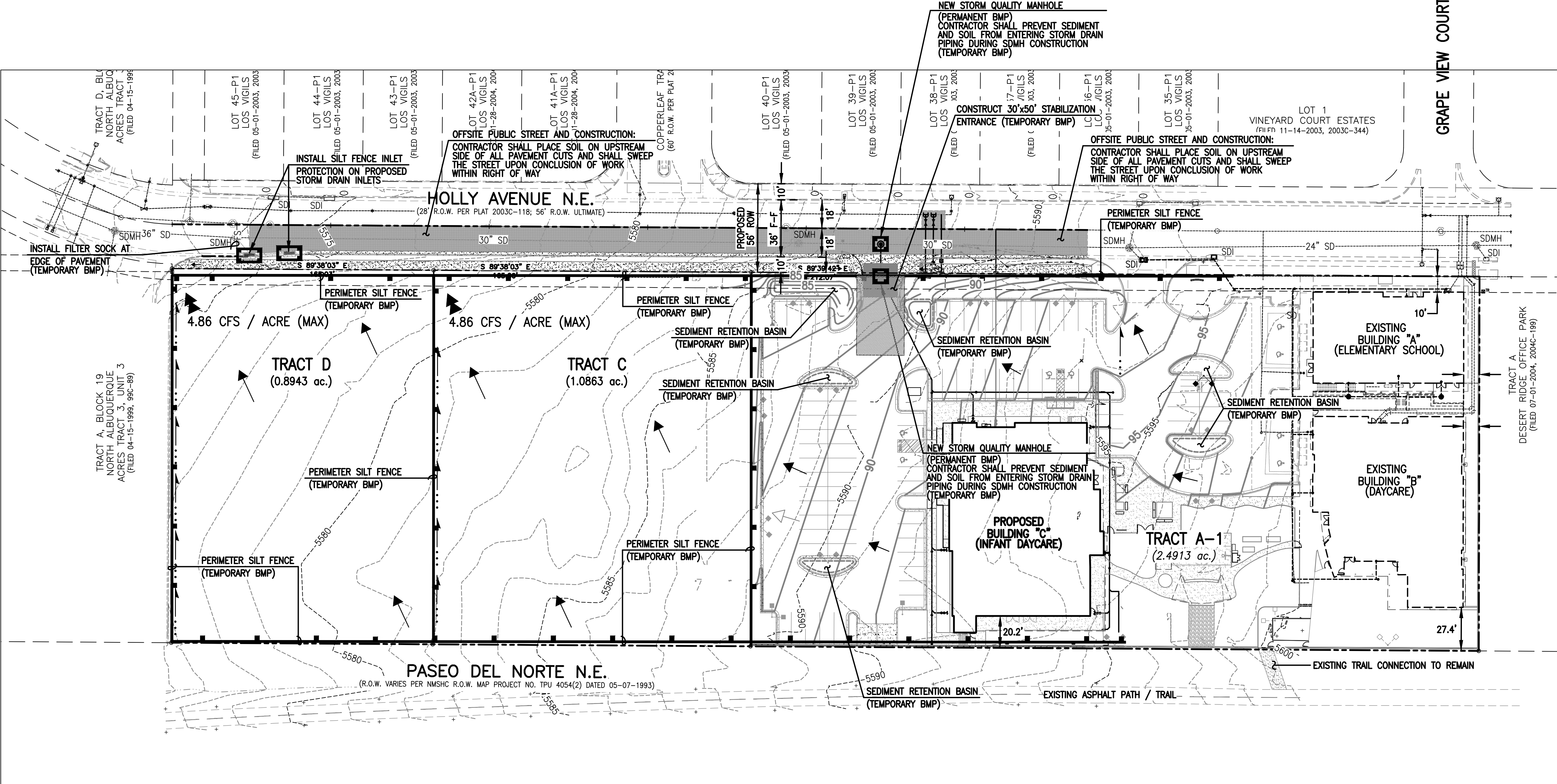
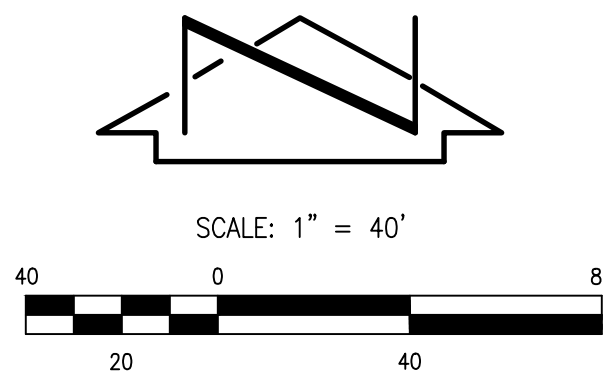
NOTE:

THIS IS NOT A BOUNDARY SURVEY; DATA IS SHOWN FOR ORIENTATION ONLY. THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON THE PLAT OF RECORD (2017C-0146, RECORDED 12-18-2017).

UNLESS OTHERWISE NOTED THE TOPOGRAPHIC AND UTILITY INFORMATION DEPICTED HEREON IS BASED UPON THE EXISTING TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY THIS FIRM, NMPS NO. 11184, DATED 01/10/2017 (2016.059.1), ALSO A PARTIAL TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY THIS FIRM, NMPS NO. 11184, DATED 05/16/2017 (2016.059.2), AND ALSO A TOPOGRAPHIC SURVEY PREPARED BY THIS FIRM, NMPS NO. 11184, DATED 10/24/2006 (2006.070.1), AND ALSO THE RECORD DRAWINGS PREPARED BY THIS FIRM, NMPE 13676, DATED 09/27/2007 (2006.070.9).



01-30-2018



**HIGH MESA Consulting Group**  
Engineers, Surveyors & Subsurface Utility Consultants

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Phone: 505.345.4250 • Fax: 505.345.4254 • www.highmesacg.com

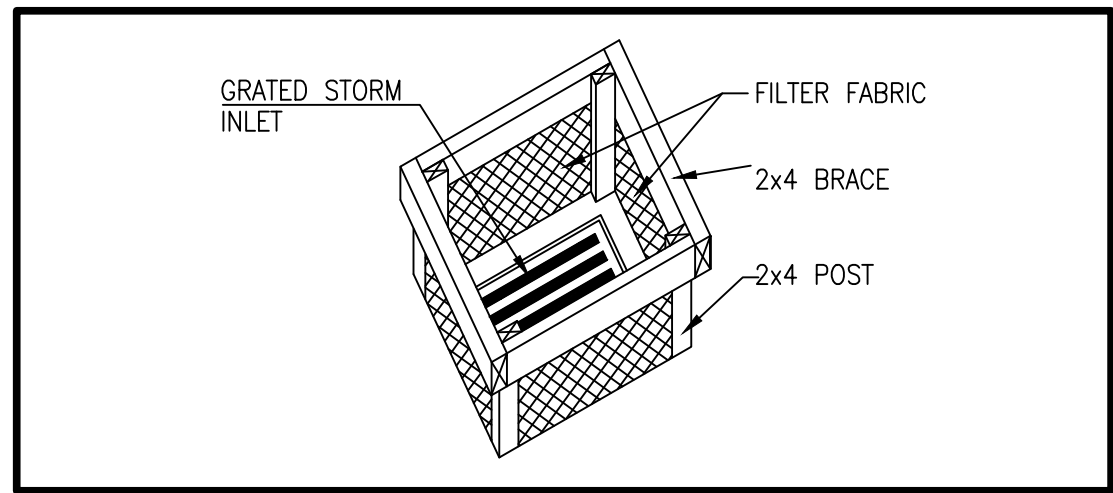
EROSION AND SEDIMENT CONTROL PLAN  
MARK 3S HOLLY DEVELOPMENT

DESIGNED BY R.J.C.  
DRAWN BY S.C.C./J.Y.R.  
APPROVED BY G.M.

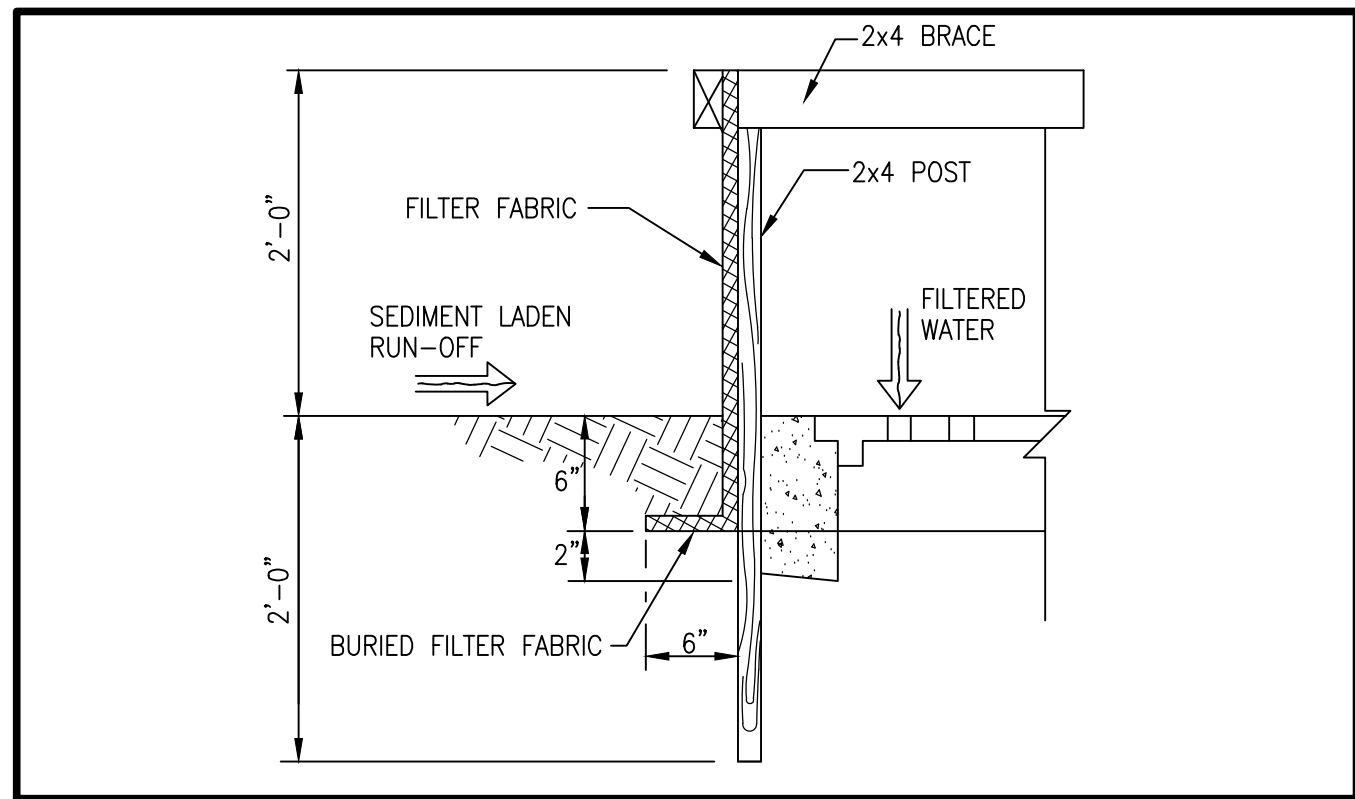
NO.	DATE	BY	REVISIONS

JOB NO.	2017.014.4
DATE	01-2018
SHEET	OF ESC-101

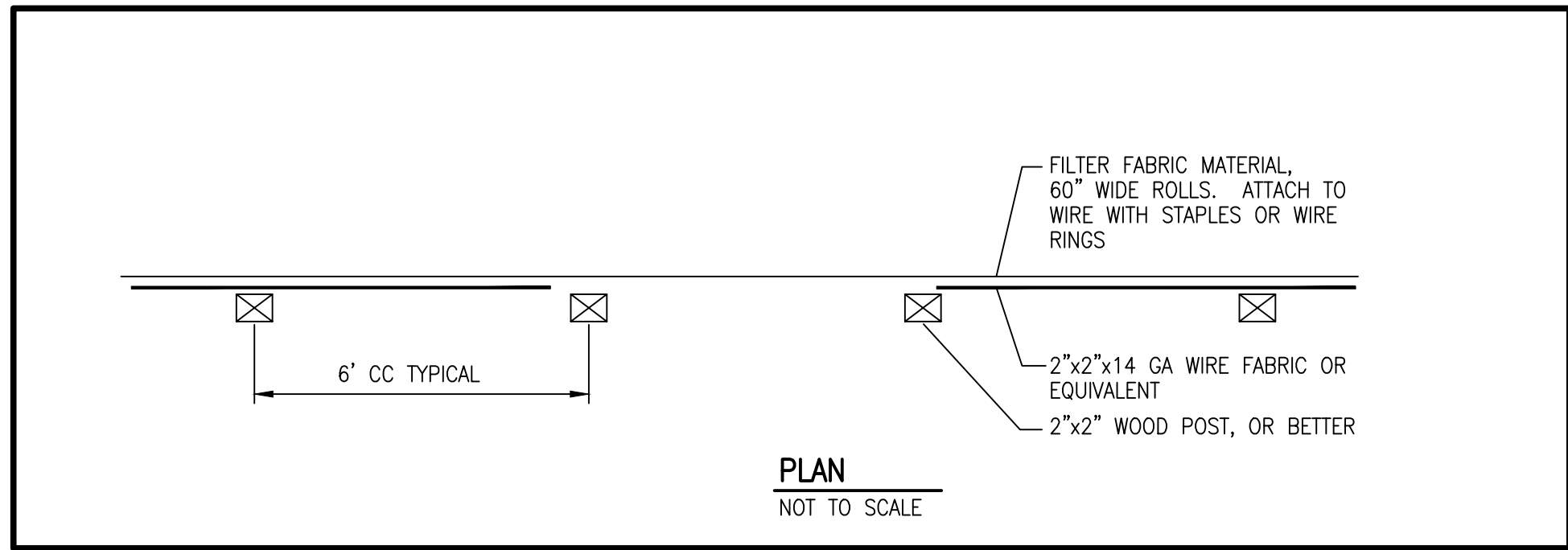




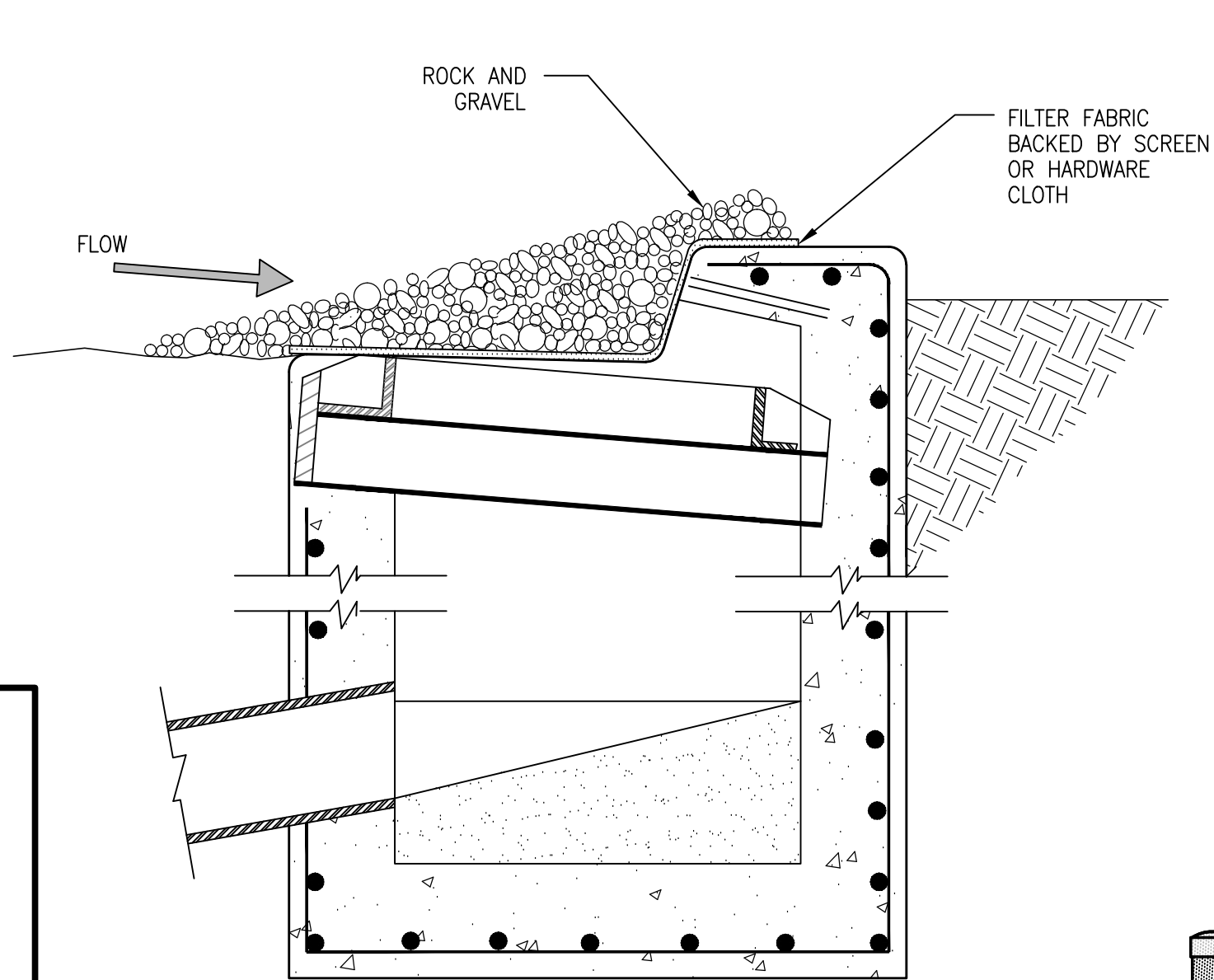
SILT FENCE INLET PROTECTION  
NOT TO SCALE



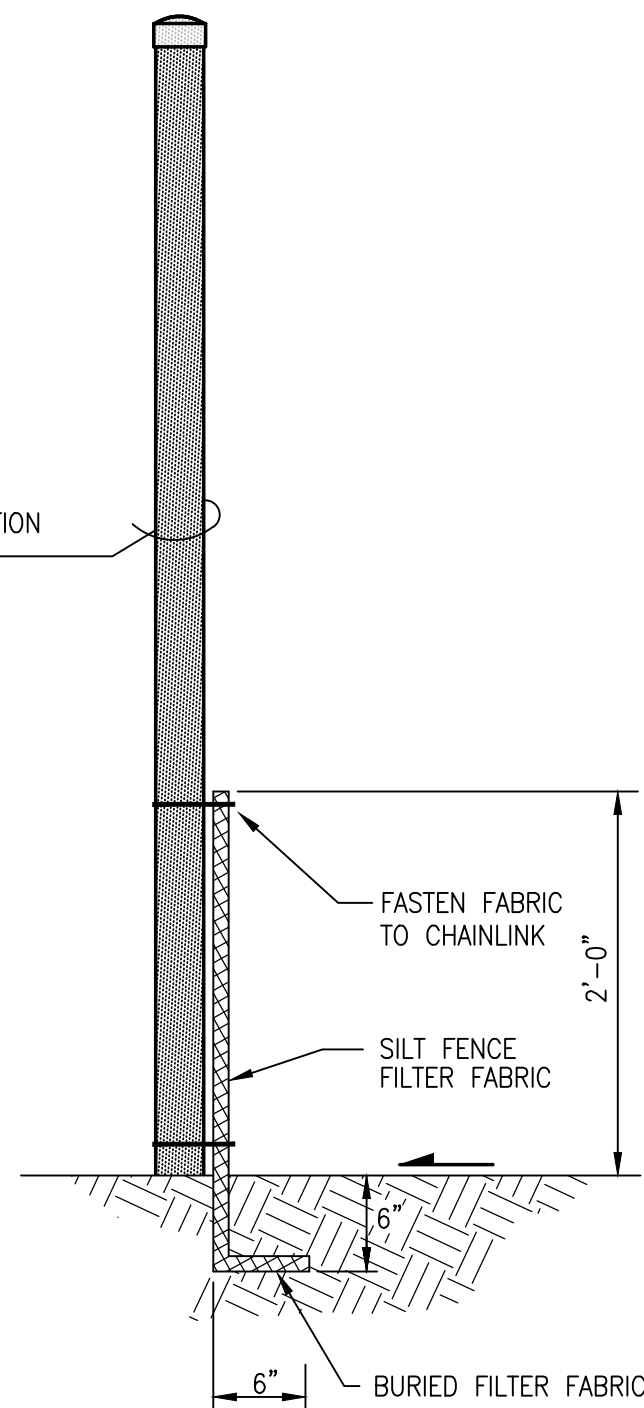
SILT FENCE INLET PROTECTION SECTION  
NOT TO SCALE



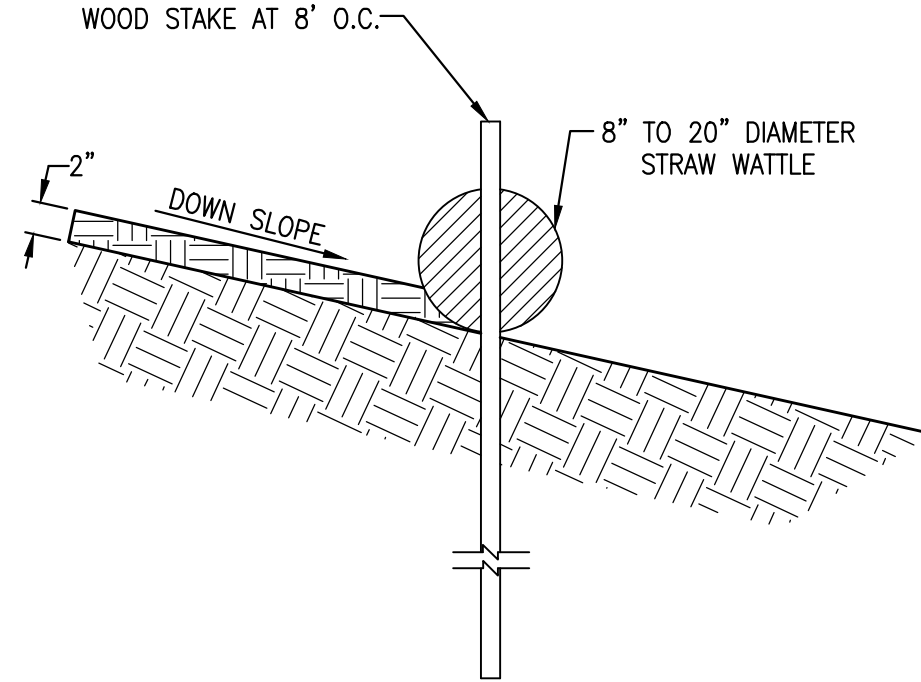
PLAN  
NOT TO SCALE



TYPICAL STORM INLET PROTECTION  
SCALE: 1" = 1'-0"



CONSTRUCTION FENCE/SILT FENCE SECTION  
SCALE: 1" = 2'-0"



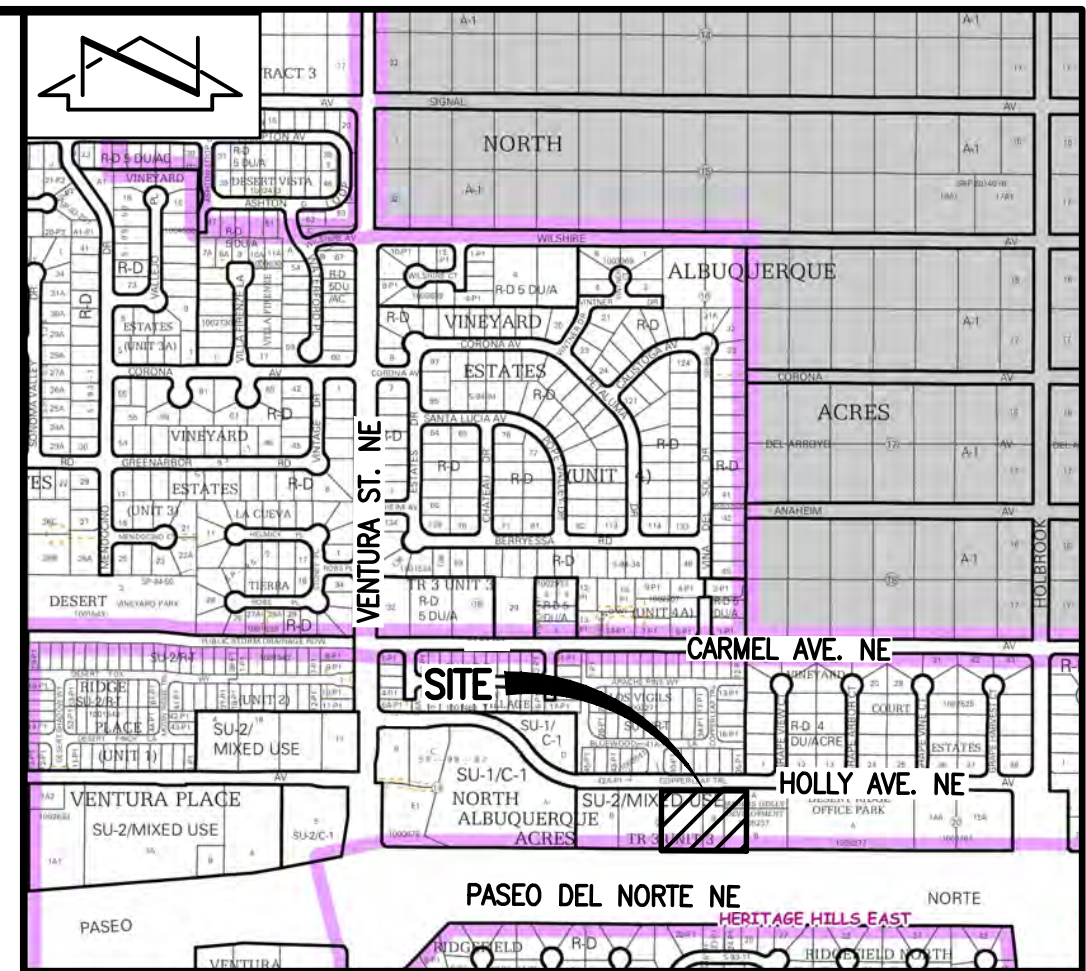
TYPICAL STRAW WATTLE INSTALLATION SECTION  
SCALE: 1" = 1'-0"

#### SEED MIX FOR SANDY SOILS

VARIETY/COMMON NAME	GENUS/SPECIES	PLS/ACRE
"PALOMA" INDIAN RICE GRASS	ORYZOPSIS HYMENOIDES	5.0
"VIVA" GALLETIA GRASS	HILARIA JAMESII	1.0
"NINER" SIDE OATS GRAMA	BOUTELOUA CURTIPENDULA	3.0
"HATCHITA" BLUE GRAMA	BOUTELOUA GRACILIS	1.0
SAND DROPSEED (NM REGION)	SPOROBOLUS CRYPTANDRUS	1.0
FOUR-WING SALTBUCH (NM REGION)	ATRIPLEX CANESCENS (DE-WINGED)	1.0
TOTAL RATE:		12.0 LBS/ACRE

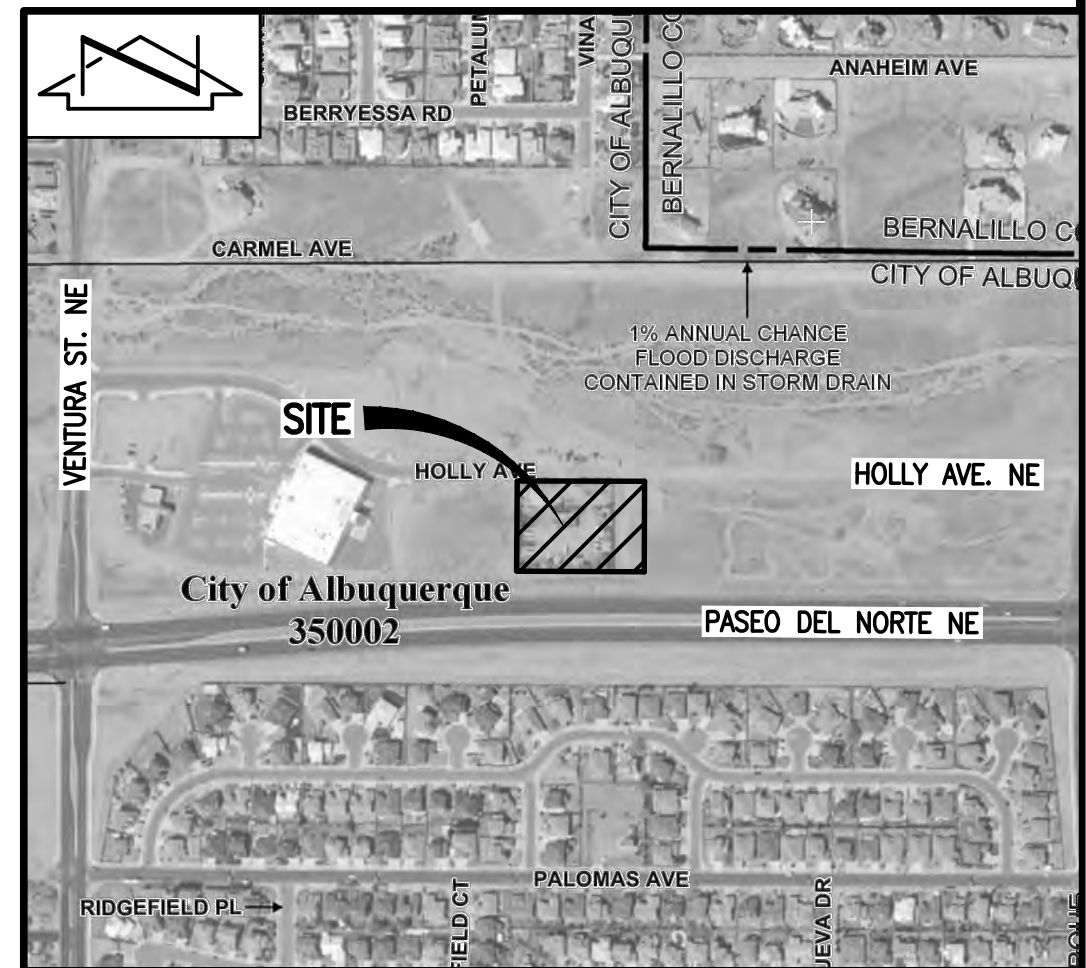
#### EROSION AND SEDIMENT CONTROL PLAN NOTES:

1. THIS PLAN ADDRESSES GENERAL AND SPECIFIC MEASURES FOR CONSTRUCTION PHASE EROSION, SEDIMENT AND DUST CONTROL. IT IS INTENDED TO COMPLEMENT THE PROJECT SPECIFIC STORM WATER POLLUTION AND PREVENTION PLAN (SWPPP) PREPARED FOR THIS PROJECT.
2. THE CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS BEFORE BEGINNING CONSTRUCTION.
3. THE CONTRACTOR SHALL INSTALL ALL PERIMETER BMPs BEFORE BEGINNING CONSTRUCTION.
4. REFER TO THE SWPPP PREPARED BY HIGH MESA CONSULTING GROUP, FOR PROJECT SPECIFIC PHASING AND INFORMATION. THIS PROJECT SHALL BE IMPLEMENTED IN PHASES TO MINIMIZE THE EXTENT AND DURATION OF SURFACE DISTURBANCE.
5. REFER TO THE GRADING AND DRAINAGE PLAN PREPARED BY HIGH MESA CONSULTING GROUP.
6. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR PRIVATE PROPERTY.
7. THE CONTRACTOR SHALL PROMPTLY CLEAN-UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
8. THE CONTRACTOR SHALL CLEAN AND REMOVE ALL FUGITIVE DUST, SOIL AND DEBRIS RESULTING FROM THIS PROJECT FROM THE ADJACENT STREETS AT THE END OF EACH DAY.
9. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN ALL GOOD HOUSEKEEPING MEASURES OUTLINED IN THE SWPPP INCLUDING , BUT NOT LIMITED TO, DAILY PICKING UP TRASH , LITTER AND CONSTRUCTION DEBRIS.
10. THE CONTRACTOR SHALL PROMPTLY REMOVE SEDIMENT ACCUMULATION FROM SILT FENCES AND OTHER STRUCTURAL BMPs WITHIN 48 HOURS OF A RAINFALL EVENT.
11. THE CONTRACTOR SHALL IMPLEMENT ONSITE STRUCTURAL EROSION CONTROL MEASURES AS REQUIRED TO COMPLY WITH THE EROSION AND SEDIMENT CONTROL PLAN AND SWPPP. THESE MEASURES MAY INCLUDE BUT ARE NOT LIMITED TO SILT FENCES, EARTHEN DIKES, DRAINAGE DIVERSIONS, SEDIMENT TRAPS, CHECK DAMS, SUBSURFACE DRAINS, PIPE SLOPE DRAINS, LEVEL SPREADERS, STORM WATER RETENTION SYSTEMS, GABIONS AND TEMPORARY OR PERMANENT SEDIMENT DETENTION BASINS. THE FOLLOWING MEASURES ARE PROPOSED FOR THIS PROJECT:
  - a. PERIMETER SILT FENCE
  - b. INTERIOR SILT FENCE
  - c. WATTLES
  - d. ONSITE INLET PROTECTION
  - e. INTERIM SEDIMENT DETENTION BASINS
  - f. GRAVEL MULCH
  - g. INTERIM REVEGETATION
  - h. SOIL STABILANT OR TACKIFIER
  - i. FILTER SOCK
12. THE CONTRACTOR SHALL MINIMIZE OFFSITE VEHICLE TRACKING OF SEDIMENT AND DUST GENERATION.
13. CONCRETE TRUCKS SHALL BE SENT BACK TO THE PLANT FOR WASHING; THE WASHING OF CONCRETE TRUCKS SHALL NOT BE PERMITTED ON THIS SITE UNLESS OTHERWISE PROVIDED FOR BY THIS PLAN. IF PROVIDED FOR BY THIS PLAN, CONCRETE TRUCKS MAY ONLY WASH OUT IN A DESIGNATED AND LINED WASHOUT FACILITY.
14. OFFSITE MATERIAL STORAGE AREAS USED BY THIS PROJECT ARE CONSIDERED PART OF THE PROJECT AND THEREFORE SUBJECT TO THE REQUIREMENTS OF THE EROSION AND SEDIMENT CONTROL PLAN AND SWPPP.
15. UPON COMPLETION OF MASS GRADING, ALL DISTURBED AREAS SHALL BE STABILIZED WITH PERMANENT CONSTRUCTION, LANDSCAPING, VEGETATION AND/OR GRAVEL MULCH. SILT FENCING CAN BE REMOVED UPON SUCCESSFUL ESTABLISHMENT OF VEGETATION.
16. THROUGHOUT THE DURATION OF THIS PROJECT, CONTRACTOR SHALL IMPLEMENT, MAINTAIN AND INSPECT ALL BMPs, KEEPING RECORDS OF EACH INSPECTION IN ACCORDANCE WITH THE SWPPP, AND KEEP RECORDS OF THE INSTALLATION MAINTENANCE, AND REMOVAL OF EACH BMP SPECIFIED BY THIS PLAN OR OTHERWISE PROVIDED FOR THROUGHOUT THE LIFE OF THE PROJECT.
17. THOSE PORTIONS OF THE COMPLETED PROJECT NOT STABILIZED WITH PERMANENT CONSTRUCTION OR FORMAL LANDSCAPING SHALL BE REVEGETATED WITH NATIVE GRASS SEEDING FOR SANDY SOILS PER THE SEED MIX SPECIFIED HEREON AND SPECIFICATIONS CONTAINED WITHIN THE SWPPP.
18. FINAL STABILIZATION OF THE PROJECT SITE WILL CONSIST OF THE FOLLOWING MEASURES:
  - a. PERMANENT BUILDING CONSTRUCTION
  - b. PERMANENT PAVING
  - c. FORMAL LANDSCAPING
  - d. GRAVEL MULCH
  - e. NATIVE GRASS VEGETATION
19. TOTAL SITE AREA = 2.4913 Ac.
20. TOTAL DISTURBED AREA = 1.73 Ac.



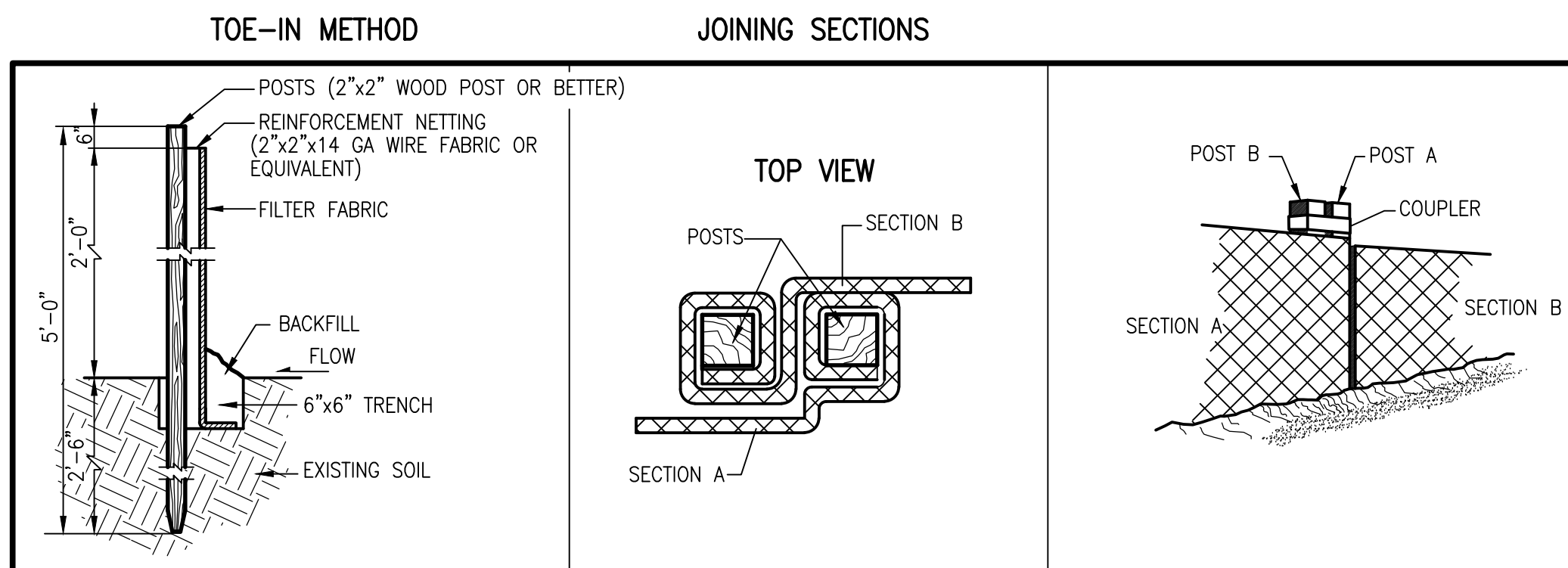
VICINITY MAP  
SCALE: 1" = 500'

C-20

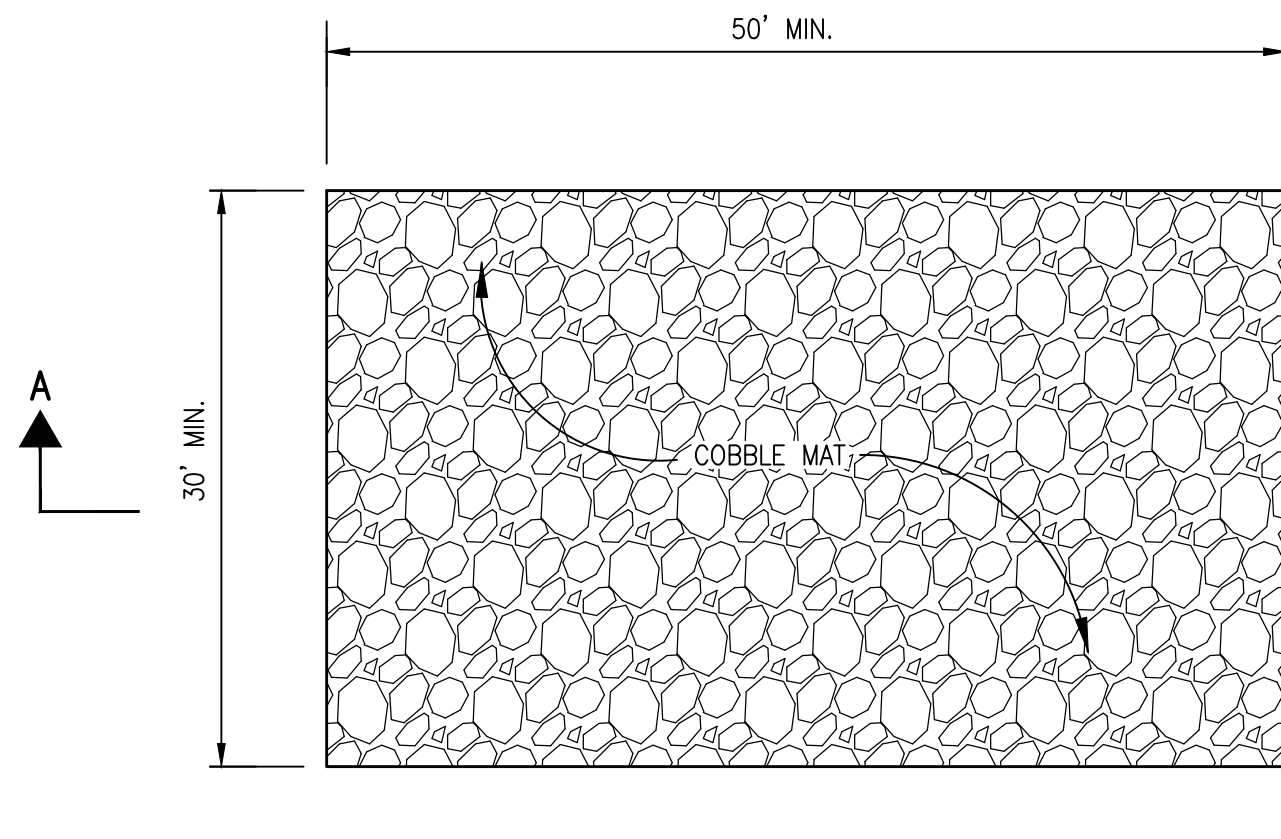


F.I.R.M.  
SCALE: 1" = 500'

141 OF 825

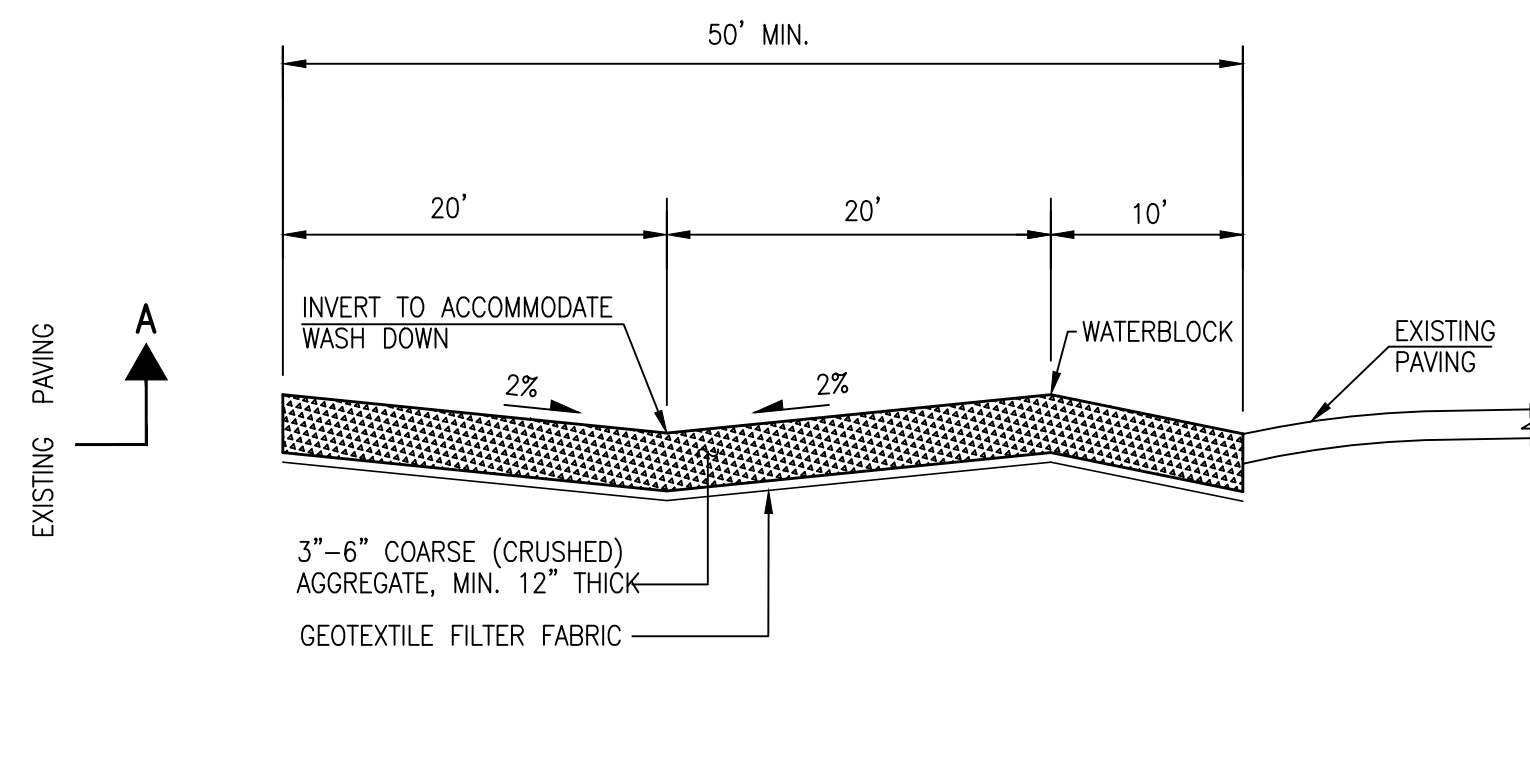


PREFABRICATED SILT FENCE DETAILS  
NOT TO SCALE

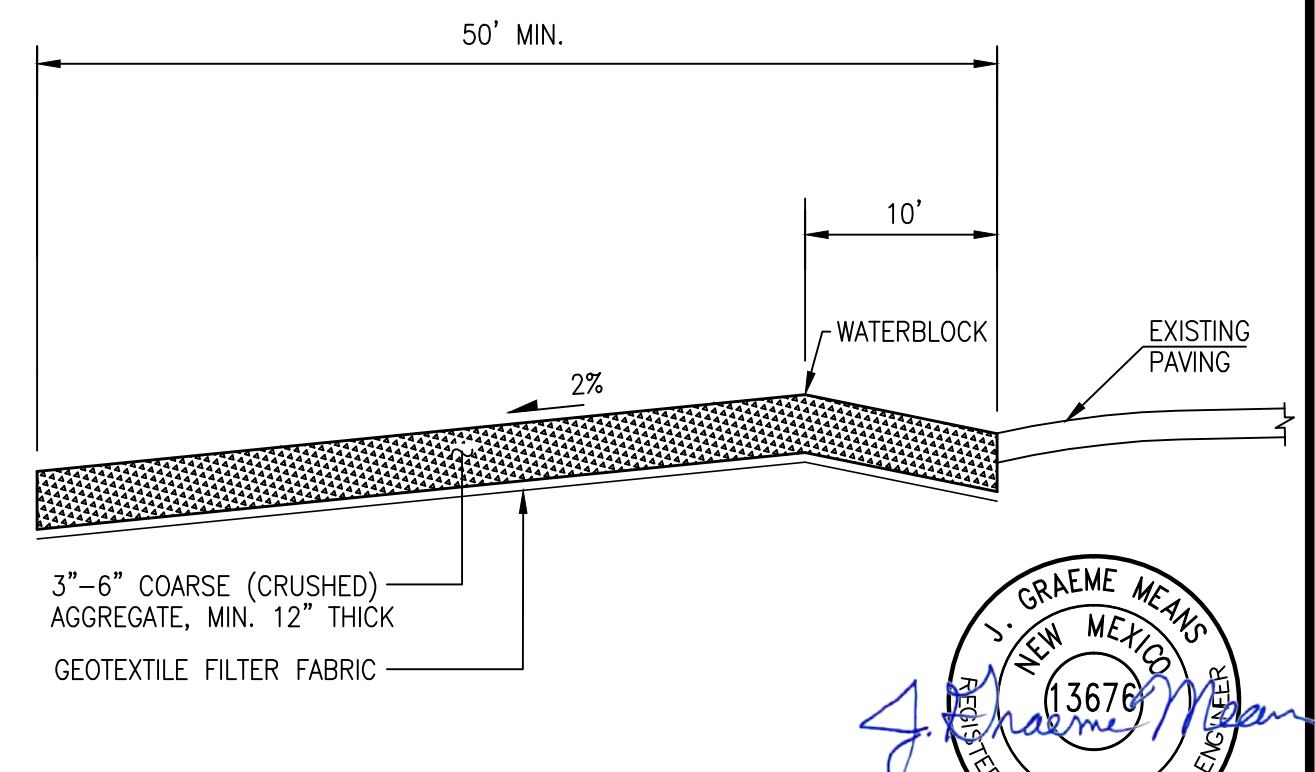


PLAN

CONSTRUCTION ENTRANCE STABILIZATION  
SCALE: 1" = 10'-0" HORIZ.



SECTION A-A



SECTION A-A



01/30/2018

NO.	DATE	BY	REVISIONS	JOB NO.
				2017.014.2
				DATE
				01-2018
				SHEET
				OF
				ESC-102