

JUNE 30, 1999

CONSTRUCTION DOCUMENTS-SUBMITTAL

KOREAN WAR VETERAN'S PARK-PHASE II

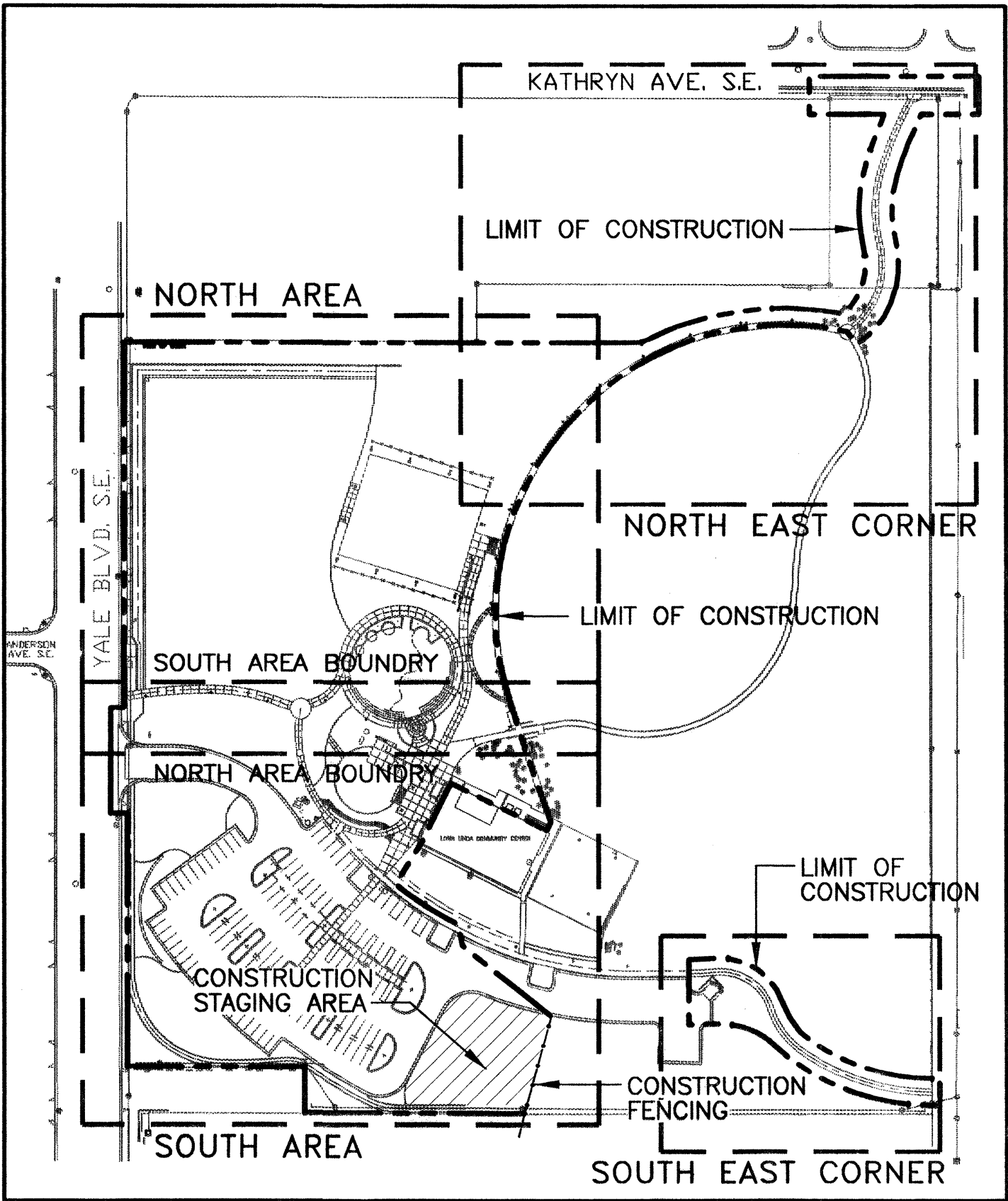
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REMOVAL PLAN-NORTH AREA
LAYOUT PLAN-SOUTH AREA
LAYOUT PLAN-NORTH AREA
LAYOUT PLAN-NORTH EAST CORNER
LAYOUT PLAN-PARKING AREA & DETAILS
LAYOUT PLAN-PLAY AREA & DETAILS
DETAILS-WALLS & STAIRS
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SHEET NO.

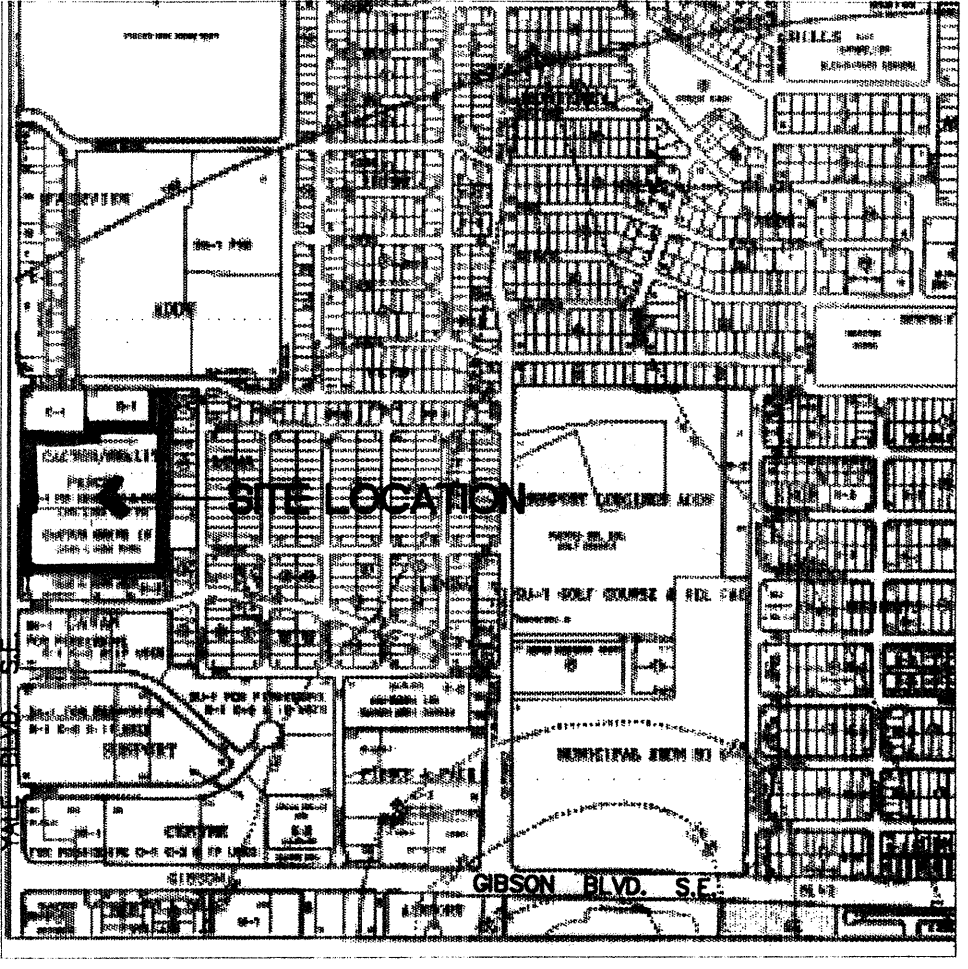
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KEY TO SHEETS

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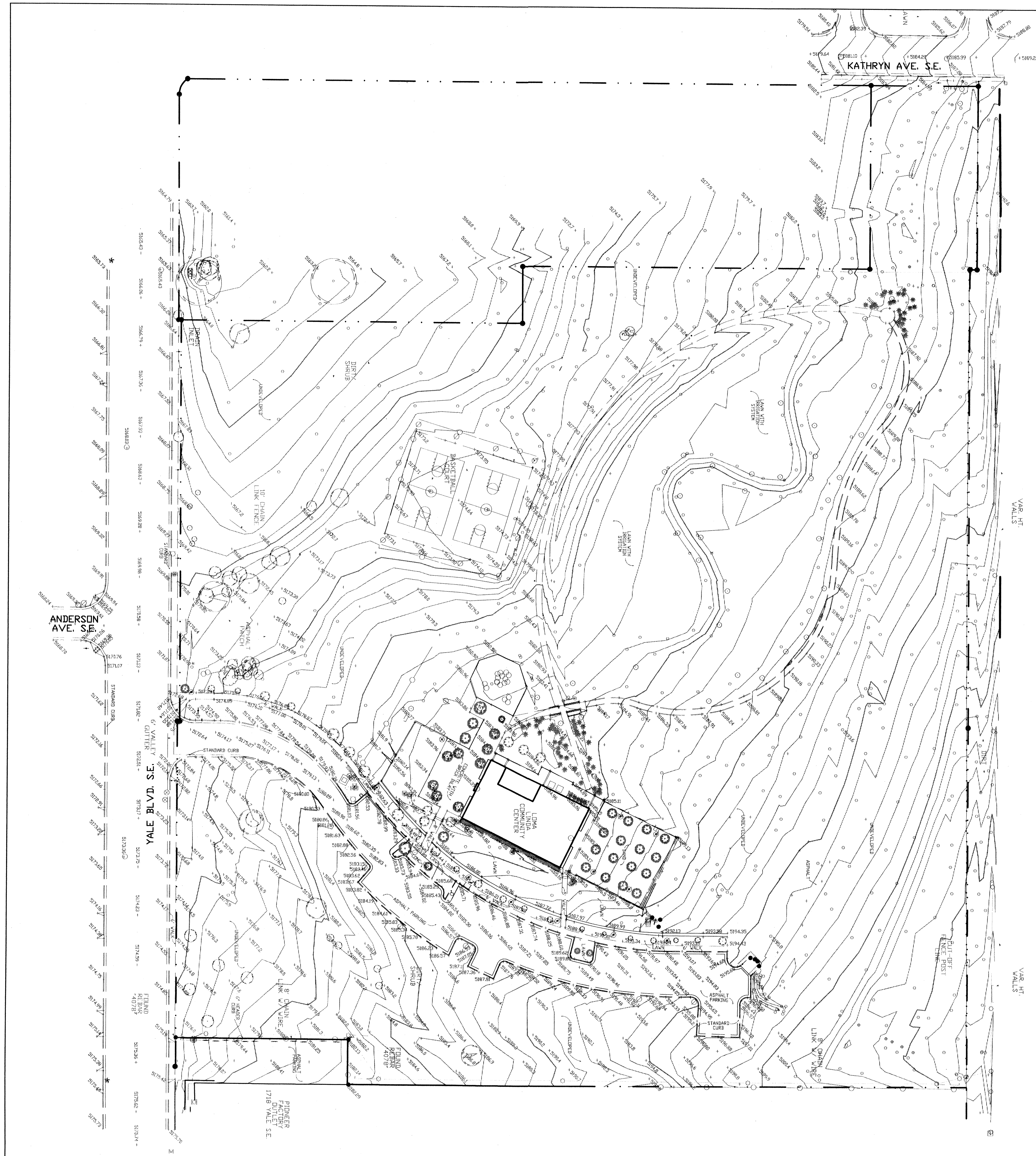
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LOCATION MAP

- ALL WORK TO BE IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS, 2886 EDITION (AS UPDATED WITH REVISION #6), OR PER ATTACHED SPECIFICATIONS.
- THE WATER SYSTEMS DIVISION (857-8280) SHALL BE NOTIFIED (5) FIVE WORKING DAYS IN ADVANCE OF ANY WORK WHICH MAY AFFECT EXISTING PUBLIC WATER FACILITIES. THE CONTRACTOR SHALL ALSO COORDINATE FOR VALVE OPERATION FOR WATER SHUTOFF.
- (5) FIVE WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. REFER TO SECTION 19 OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS. (2) TWO WORKING DAYS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (768-2851) PRIOR TO OCCUPYING AN INTERSECTION. SEE SECTION 19 OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS.
- ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH PLASTIC REFLECTORIZED PAVEMENT MARKINGS BY CONTRACTOR TO LOCATION AS EXISTING OR AS INDICATED BY THIS PLAN SET.
- THE CONTRACTOR SHALL CONTACT NEW MEXICO ONE CALL SYSTEM PHONE: 280-1990, TO LOCATE UNDERGROUND UTILITIES 2 WORK DAYS PRIOR TO BEGINNING EXCAVATION.
- THE CONTRACTOR SHALL CONTACT TRAFFIC ENGINEERING OPERATIONS 857-8680 FOR REMOVAL AND REPLACEMENT OF TRAFFIC SIGNS.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, UNLESS NOTED OTHERWISE. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ALL EXISTING IMPROVEMENTS ARE TO REMAIN, UNLESS SPECIFICALLY NOTED TO BE REMOVED. CONTRACTOR SHALL REPAIR ANY CONTRACTOR-CAUSED DAMAGE, AS DETERMINED BY THE ENGINEER TO EXISTING IMPROVEMENTS TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CHECK ALL DIMENSIONS, HORIZONTAL AND VERTICAL, AND SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CONFLICT CAN BE RESOLVED WITH THE MINIMUM AMOUNT OF DELAY.
- FOR PURPOSES OF THIS PROJECT THE TERM ENGINEER SHALL REFER TO EITHER THE OWNER'S EMPLOYEE THE ARCHITECT OR THE LANDSCAPE ARCHITECT RESPONSIBLE FOR CONSTRUCTION INSPECTION OF THE PROJECT.
- ALL REFERENCES TO COMPACTED BACKFILL OR COMPACTED SUBGRADE SHALL MEAN SOIL COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK, IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY OF ALBUQUERQUE SURVEY SECTION. WHEN A CHANGE IS MADE IN THE FINISH ELEVATION OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO NEW GRADE, UNLESS OTHERWISE SPECIFIED.

REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE
ARCHITECT'S SEAL		APPROVALS		ENGINEER		DATE	
		DCR Chairman		<i>Jonathan S. Craig</i>		7-29-99	
		Transportation		<i>Jonathan S. Craig</i>		7-12-99	
		Water/Wastewater		<i>Jonathan S. Craig</i>		7-12-99	
		Hydrology		<i>Jonathan S. Craig</i>		7-12-99	
		Civ. P.		<i>Jonathan S. Craig</i>		7-12-99	
Constr. Mngmt.							
Constr. Coord.							
City Project Number				5020.92		Sheet CS1 of 28	



LEGEND

- TRVERSE POINT
- IRON REBAR
- PIPE
- MANHOLE
- DRAIN INLET
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- TRAFFIC SIGNAL
- WATER VALVE
- GAS RISER
- WATER RISER
- ELECTRIC RISER
- TELEPHONE RISER
- POWER POLE WITH LIGHT
- POWER POLE
- FIRE HYDRANT
- SIGN POST
- DECIDUOUS TREE
- CONIFEROUS TREE
- BUSH
- CHAIN LINK FENCE
- OVER HEAD WIRE
- STORM DRAIN LINE
- SANITARY SEWER LINE
- UNDERGROUND TRAFFIC LINE
- UNDGRD. TRAFFIC SIGNAL & CONDUIT
- UNDGRD. TELEPHONE LINE
- UNDGRD. (T.V.) CABLE LINE
- GAS LINE
- CURB HT. ABOVE LOWEST ADJACENT GRADE
- STATION POINT
- EXISTING SPOT ELEVATION (AS INTERPOLATED OR STATED IN SURVEY)
- PROPOSED SPOT ELEVATION
- TOP OF PLANTER/BOTTOM OF PLANTER
- JONES INTERCABLE

TO: 4960.3
TP: BP
-NC-

(C) 4960.2

1400

+ 3' HT.

UNDGRD. (T.V.) CABLE LINE

UNDGRD. TELEPHONE LINE

UNDGRD. TRAFFIC SIGNAL & CONDUIT

STORM DRAIN LINE

OVER HEAD WIRE

CHAIN LINK FENCE

BUSH

CONIFEROUS TREE

DECIDUOUS TREE

SIGN POST

FIRE HYDRANT

POWER POLE

POWER POLE WITH LIGHT

TELEPHONE RISER

ELECTRIC RISER

WATER RISER

GAS RISER

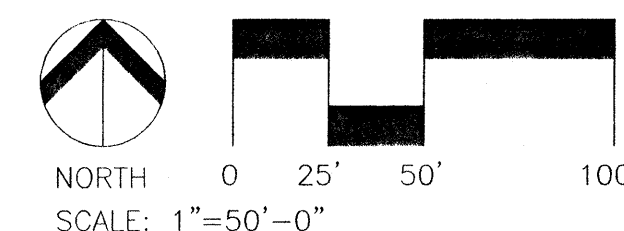
AS-BUILT INFORMATION	
CONTRACTOR	
WORK STAGED BY	
DATE	
ACCEPTANCE BY	
DATE	
REVISION BY	
DATE	
COMPLETED BY	
DATE	
MICRO-FILM INFORMATION	
RECORDED BY	
DATE	
NO.	

BENCH MARKS	
PROJECT BENCHMARK	
CITY OF ALBUQUERQUE BENCHMARK "7-L15. A 3 1/4 ALUMINUM	
CAP SET IN DRILL HOLE, FLUSH WITH THE TOP CURB.	
STATIONED IS STAMPED "ACS. 7-L15, 1984". LOCATED 56.2'	
NORTHWEST OF YALE BLVD. AND KATHRYN AVE.	
ELEVATION = 5161.47' (M.S.L.D.)	
T.B.M. = TOP OF STORM DRAIN MANHOLE RIM.	
ELEVATION = 5165.43' (M.S.L.D.)	

SURVEY INFORMATION	
FIELD NOTES	
DATE	
BY	
COA	
NO.	
1	
2	

LANDSCAPE ARCHITECT'S SEAL	
DATE	
BY	
REMARKS	
DESIGN	
NO.	
DATE	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
DATE	5-7-99

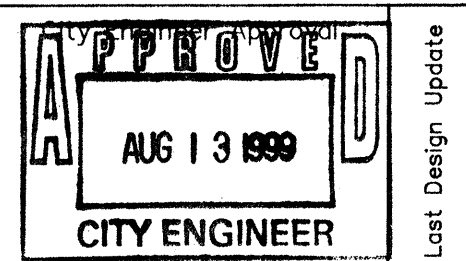
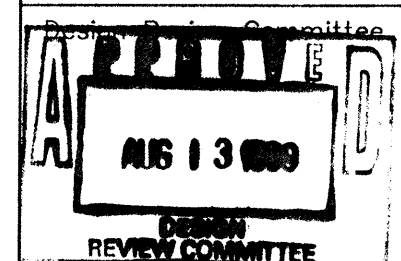
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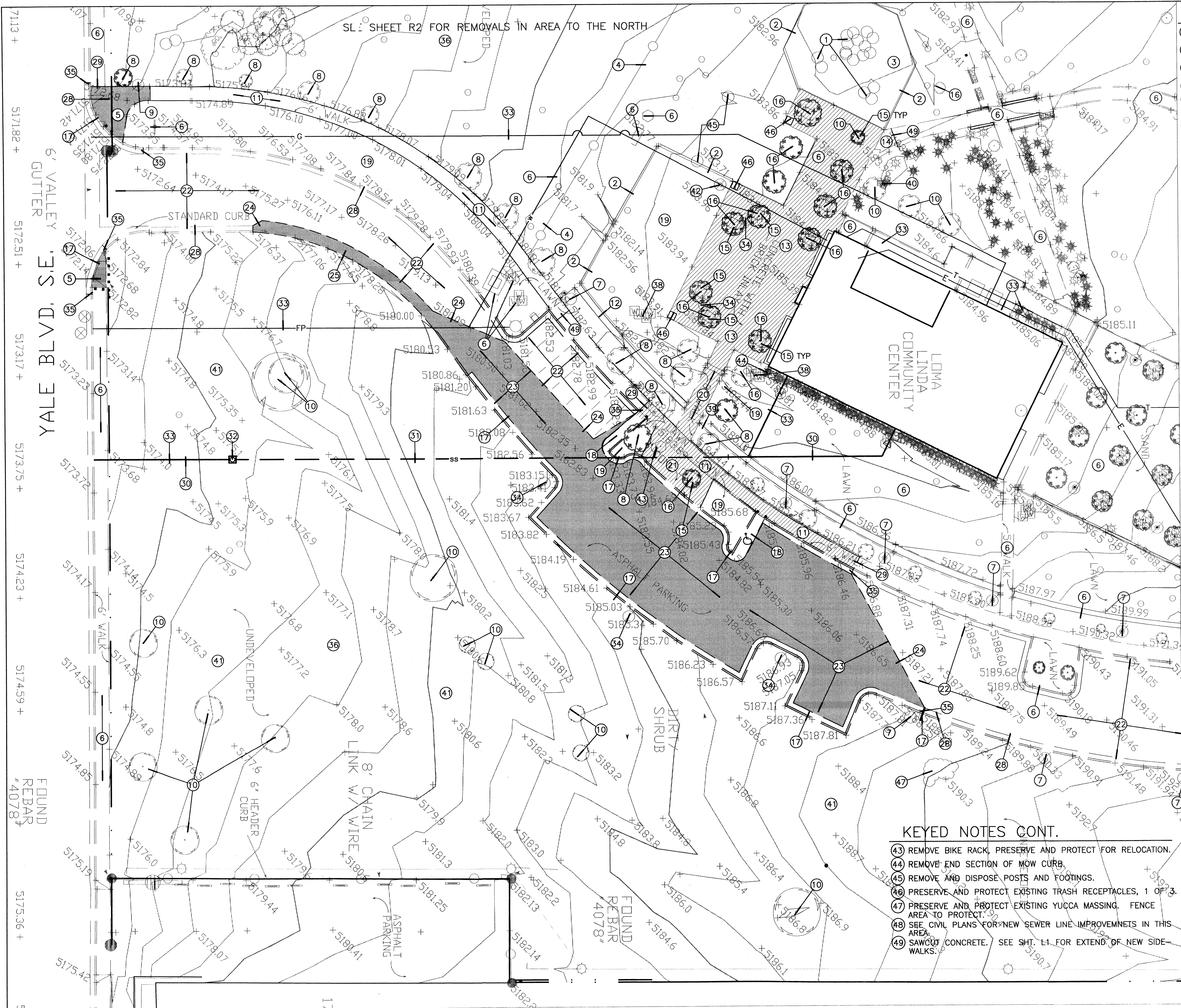
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CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

TITLE: PROJECT: KOREAN WAR VETERANS PARK
SHEET: TOPOGRAPHIC SURVEY



City Project No. 5020.92
Zone Map No. L-16-Z
Sheet TS1 of 28



- KEYED NOTES:**
- 1 REMOVE AND DISPOSE ALL EXISTING PLAY EQUIPMENT INCLUSIVE OF FOOTINGS.
 - 2 REMOVE AND DISPOSE EXISTING CONCRETE CURB AT EDGE OF LAWN AREA.
 - 3 REMOVE SAND PLAY AREA. SAND MAY BE UTILIZED AS PART OF FILL. SEE GRADING PLAN.
 - 4 REMOVE AND DISPOSE EXISTING CHAIN LINK FENCE.
 - 5 REMOVE AND DISPOSE EXISTING CONCRETE SIDEWALK INCLUSIVE OF WOOD BOLLARDS. (2 BOLLARDS ON NORTH SIDE, 8 BOLLARDS ON SOUTH SIDE).
 - 6 PRESERVE AND PROTECT EXISTING IMPROVEMENTS THAT ARE TO REMAIN.
 - 7 PRESERVE AND PROTECT EXISTING LIGHT STANDARD THAT IS TO REMAIN.
 - 8 PRESERVE AND PROTECT EXISTING TREE THAT IS TO REMAIN.
 - 9 REMOVE AND DELIVER TO THE CITY EXISTING LIGHT POST. PROTECT EXISTING FOOTING.
 - 10 REMOVE AND DISPOSE EXISTING TREE.
 - 11 REMOVE AND DISPOSE EXISTING 6' WALK.
 - 12 REMOVE AND DISPOSE EXISTING CONCRETE CURBS AND JOGGING PATH SURFACE.
 - 13 REMOVE AND DISPOSE EXISTING CONCRETE PAVING AND BRICK BANDS.
 - 14 REMOVE AND DISPOSE EXISTING CONCRETE WALK.
 - 15 REMOVE AND TURN OVER TO THE OWNER THE EXISTING TREE GRATES.
 - 16 TREES TO BE CONSIDERED FOR TRANSPLANTING BY PARK MANAGEMENT. CONTACT TOM ELLIS AT 857-8650 TO IDENTIFY TREES TO BE TRANSPLANTED. CONTRACTOR TO CAREFULLY REMOVE TREE GRATES, CONCRETE OR OTHER OBSTRUCTIONS AS NECESSARY FOR TREES IDENTIFIED FOR TRANSPLANTING BY PARK MANAGEMENT. ALL REMAINING TREES NOT IDENTIFIED FOR TRANSPLANTING ARE TO BE REMOVED AND DISPOSED OF.
 - 17 REMOVE AND DISPOSE EXISTING CONCRETE CURB AND GUTTER.
 - 18 REMOVE AND DISPOSE EXISTING CONCRETE RAMP.
 - 19 REMOVE AND DISPOSE EXISTING LAWN AND ASSOCIATED IRRIGATION.
 - 20 REMOVE AND DISPOSE EXISTING 8' WALK.
 - 21 REMOVE AND DISPOSE EXISTING CONCRETE PAVING.
 - 22 PRESERVE AND PROTECT EXISTING ASPHALT PAVING.
 - 23 REMOVE AND DISPOSE ASPHALT PAVING.
 - 24 SAWCUT ASPHALT PAVING TO LIMITS FOR INSTALLATION OF CONCRETE CURB AND GUTTER WHERE APPLICABLE.
 - 25 REMOVE AND DISPOSE EXISTING ASPHALT CURB.
 - 26 PRESERVE AND PROTECT EXISTING HEADER CURB.
 - 27 PRESERVE AND PROTECT EXISTING CHAIN LINK FENCE.
 - 28 PRESERVE AND PROTECT EXISTING CONCRETE CURB.
 - 29 SAWCUT CONCRETE. SEE SHT. L4 FOR EDGE OF NEW SIDEWALK.
 - 30 SANITARY SEWER LINE TO REMAIN. SEE CIVIL PLANS FOR EXTENT TO REMAIN AND AMOUNT TO BE REMOVED.
 - 31 4" DIAMETER SANITARY SEWER LINE TO BE REMOVED. SEE CIVIL PLANS.
 - 32 SEE CIVIL PLANS FOR INSTRUCTIONS FOR THIS CLEAN OUT.
 - 33 PRESERVE AND PROTECT EXISTING UTILITY LINES. VERIFY ALL LOCATIONS.
 - 34 REMOVE EXISTING LIGHT STANDARD AND FIXTURE COMPLETE AND PROTECT FOR RELOCATION.
 - 35 SAW-CUT EXISTING CONCRETE CURB AND GUTTER.
 - 36 CLEAR AND GRUB ALL AREAS PROPOSED FOR GRADING ALTERATION. SEE GRADING PLAN.
 - 37 PRESERVE AND PROTECT EXISTING WATER SYSTEM IMPROVEMENTS.
 - 38 RELOCATE IRRIGATION EQUIPMENT AS REQUIRED. SEE IRRIGATION PLANS FOR LOCATIONS.
 - 39 REMOVE SEGMENT OF JOGGING PATH.
 - 40 REMOVE AND STORE BENCH FOR RELOCATION. SEE SITE PLAN FOR NEW LOCATION.
 - 41 CAREFULLY REMOVE ALL YUCCA AND PRICKLY PEAR CACTUS FROM ALL AREAS PROPOSED FOR GRADING ALTERATIONS. STORE AND MAINTAIN PLANTS FOR RELOCATION. SEE PLANTING PLANS FOR LOCATIONS.
 - 42 RELOCATE EXISTING WATER METER, SEE SHT. I1.

- KEYED NOTES CONT.**
- 43 REMOVE BIKE RACK, PRESERVE AND PROTECT FOR RELOCATION.
 - 44 REMOVE END SECTION OF MOW CURB.
 - 45 REMOVE AND DISPOSE POSTS AND FOOTINGS.
 - 46 PRESERVE AND PROTECT EXISTING TRASH RECEPTACLES, 1 OF 3.
 - 47 PRESERVE AND PROTECT EXISTING YUCCA MASSING. FENCE AREA TO PROTECT.
 - 48 SEE CIVIL PLANS FOR NEW SEWER LINE IMPROVEMENTS IN THIS AREA.
 - 49 SAWCUT CONCRETE. SEE SHT. L1 FOR EXTEND OF NEW SIDEWALKS.

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CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

TITLE: PROJECT: KOREAN WAR VETERANS PARK
SHEET: REMOVAL PLAN-SOUTH AREA

DESIGNED BY ASM
DRAWN BY WBT
CHECKED BY WSP

DATE 4-99
DATE 4-99
DATE 4-99

REVISIONS

NO.	DATE	BY

APPROVED
AUG 13 1999
DESIGN REVIEW COMMITTEE

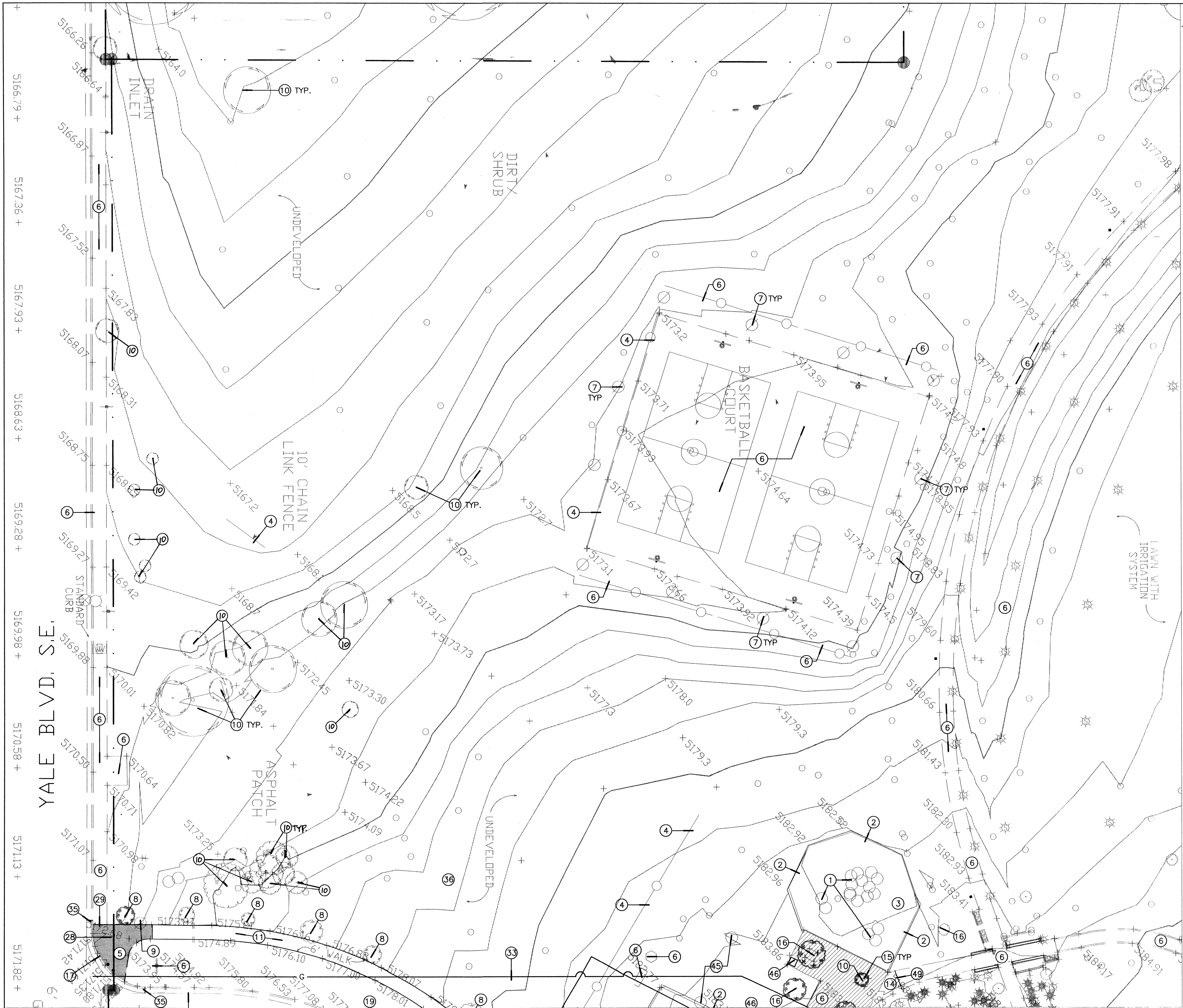
APPROVED
AUG 13 1999
CITY ENGINEER

City Project No. 5020.92

Zone Map No. L-16-Z

Sheet R1 of 28

AS-BUILT INFORMATION			
CONTRACTOR	WORK STAGED BY	DATE	DATE
PROJECT BENCHMARK:	CITY OF ALBUQUERQUE BENCHMARK "7-L15, A 3 1/4 ALUMINUM CAP SET IN DRILL HOLE, FLUSH WITH THE TOP CURB. STATIONED IS STAMPED "ACS, 7-L15, 1984". LOCATED 56.2' NORTHWEST OF YALE BLVD. AND KATHRYN AVE. ELEVATION = 5161.47' (M.S.L.D.) T.B.M. = TOP OF STORM DRAIN MANHOLE RIM. ELEVATION = 5165.43' (M.S.L.D.)	FIELD ACCEPTANCE BY	DATE
BENCH MARKS	STATIONED IS STAMPED "ACS, 7-L15, 1984". LOCATED 56.2' NORTHWEST OF YALE BLVD. AND KATHRYN AVE. ELEVATION = 5161.47' (M.S.L.D.) T.B.M. = TOP OF STORM DRAIN MANHOLE RIM. ELEVATION = 5165.43' (M.S.L.D.)	DRAWINGS CORRECTED BY	DATE
SURVEY INFORMATION	FIELD NOTES	NO.	DATE
1	COA	8/95	
2	COA	7/97	



- KEYED NOTES:**
- ① REMOVE AND DISPOSE ALL EXISTING PLAY EQUIPMENT INCLUSIVE OF FOOTINGS.
 - ② REMOVE AND DISPOSE EXISTING CONCRETE CURB AT EDGE OF LAWN AREA.
 - ③ REMOVE SAND PLAY AREA. SAND MAY BE UTILIZED AS PART OF FILL. SEE GRADING PLAN.
 - ④ REMOVE AND DISPOSE EXISTING CHAIN LINK FENCE.
 - ⑤ REMOVE AND DISPOSE EXISTING CONCRETE SIDEWALK INCLUSIVE OF WOOD BOLLARDS. (2 BOLLARDS ON NORTH SIDE, 8 BOLLARDS ON SOUTH SIDE.
 - ⑥ PRESERVE AND PROTECT EXISTING IMPROVEMENTS THAT ARE TO REMAIN.
 - ⑦ PRESERVE AND PROTECT EXISTING LIGHT STANDARD THAT IS TO REMAIN.
 - ⑧ PRESERVE AND PROTECT EXISTING TREE THAT IS TO REMAIN.
 - ⑨ REMOVE AND DELIVER TO THE CITY EXISTING LIGHT POST. PROTECT EXISTING FOOTING.
 - ⑩ REMOVE AND DISPOSE EXISTING TREE.
 - ⑪ REMOVE AND DISPOSE EXISTING 6' WALK.
 - ⑫ REMOVE AND DISPOSE EXISTING CONCRETE WALK.
 - ⑬ TREES TO BE CONSIDERED FOR TRANSPLANTING BY PARK MANAGEMENT. CONTACT TOM ELLIS AT 857-8650 TO IDENTIFY TREES TO BE TRANSPLANTED. CONTRACTOR TO CAREFULLY REMOVE TREE GRATES, CONCRETE OR OTHER OBSTRUCTIONS AS NECESSARY FOR TREES IDENTIFIED FOR TRANSPLANTING BY PARK MANAGEMENT. ALL REMAINING TREES NOT IDENTIFIED FOR TRANSPLANTING ARE TO BE REMOVED AND DISPOSED OF.
 - ⑭ REMOVE AND DISPOSE EXISTING CONCRETE CURB AND GUTTER.
 - ⑮ SAWCUT CONCRETE AT NEAREST SCORE JOINT.
 - ⑯ PRESERVE AND PROTECT EXISTING UTILITY LINES. VERIFY ALL LOCATIONS.
 - ⑰ SAW-CUT EXISTING CONCRETE CURB AND GUTTER.
 - ⑱ CLEAR AND GRUB ALL AREAS PROPOSED FOR GRADING ALTERATION. SEE GRADING PLAN.
 - ⑲ REMOVE AND DISPOSE POSTS AND FOOTINGS.
 - ⑳ PRESERVE AND PROTECT EXISTING TRASH RECEPTACLES, 1 OF 3.
 - ㉑ SAWCUT CONCRETE. SEE SHT. L1 FOR EXTEND OF NEW SIDE-WALKS.

SURVEY INFORMATION	
NO.	FIELD NOTES
1	BY COA
2	COA

LANDSCAPE ARCHITECT'S SEAL	

REVISIONS	
NO.	DATE
1	8/95
2	7/97

DESIGNED BY	ASM	DATE	4-99
DRAWN BY	WBT	DATE	4-99
CHECKED BY	WSP	DATE	4-99

CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

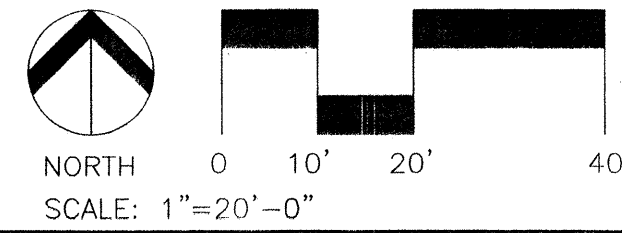
TITLE: PROJECT: KOREAN WAR VETERANS PARK
SHEET: REMOVAL PLAN-NORTH AREA

City Project No. 5020.92

Zone Map No. L-16-Z

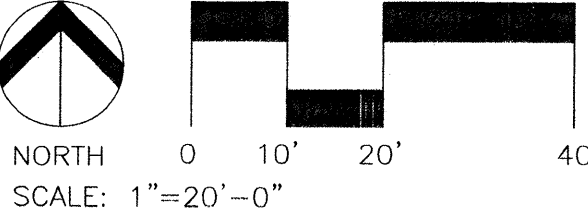
Sheet R2 Of 28

SEE SHEET R1 FOR REMOVALS IN AREA TO THE NORTH

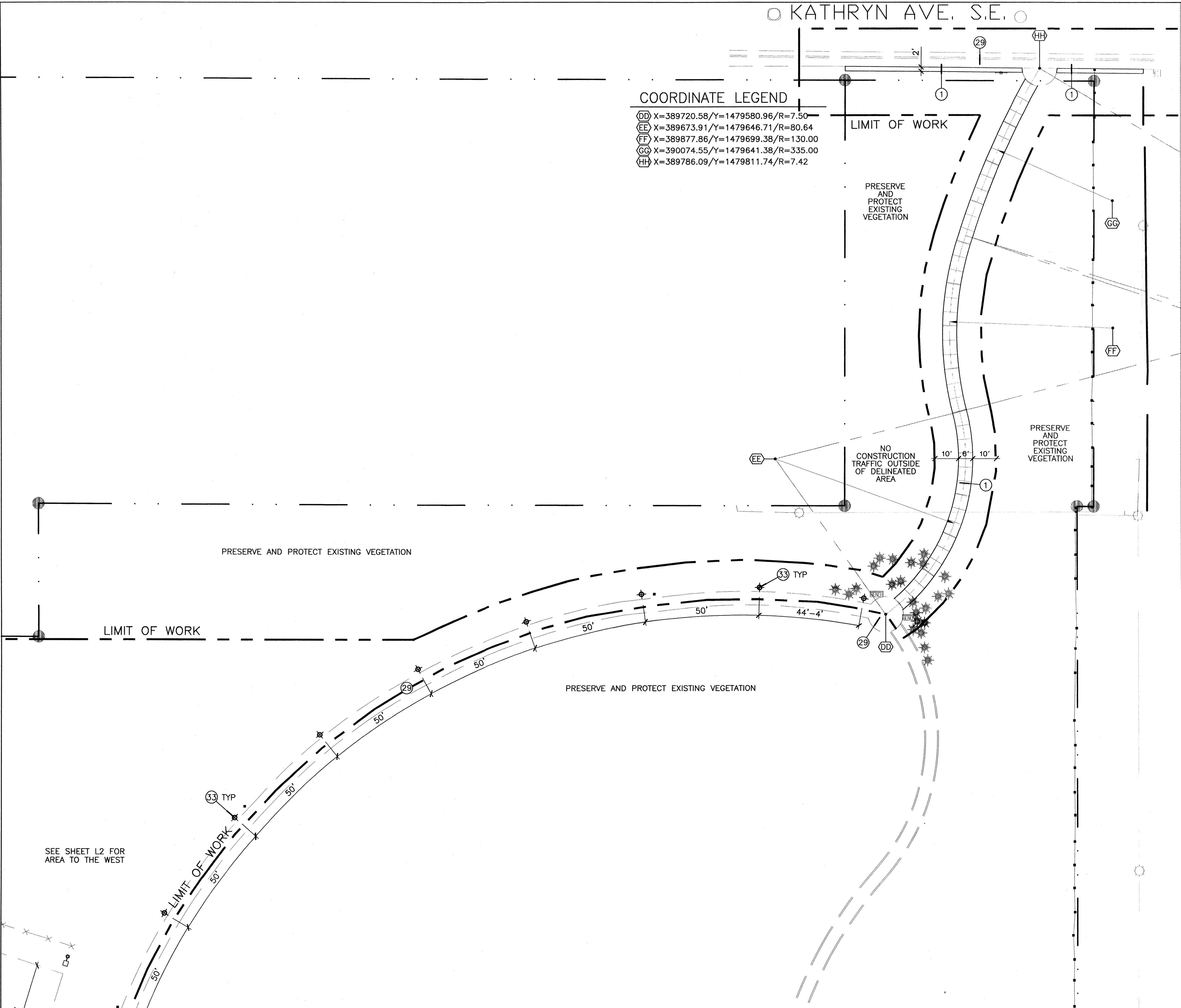


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PROGRAM													
TRANS PARK AREA													
Mo./Day/Yr.						Mo./Day/Yr.							
Sheet L2 of 28													



COORDINATE LEGEND

- DD X=389720.58/Y=1479580.96/R=7.50
- EE X=389673.91/Y=1479646.71/R=80.64
- FF X=389877.86/Y=1479699.38/R=130.00
- GG X=390074.55/Y=1479641.38/R=335.00
- HH X=389786.09/Y=1479811.74/R=7.42

KEYED NOTES:

- 1 CONCRETE WALK. AS PER C.O.A. STD. DETAIL 2720.
- 29 PRESERVE AND PROTECT EXISTING SIDEWALK.
- 33 PEDESTRIAN LIGHTING-12' POLE. CONCRETE BASE 6" ABOVE GRADE. SEE ELECTRICAL PLANS.

NOTE: CONTRACTOR TO SCHEDULE HIS WORK TO COMPLETE CONNECTION TO KATHRYN AVE. PRIOR TO THE REMOVAL OF THE EXISTING SIDEWALK FROM YALE BLVD. ACCESSIBLE ACCESS TO THE FACILITY MUST BE MAINTAINED.

NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING.

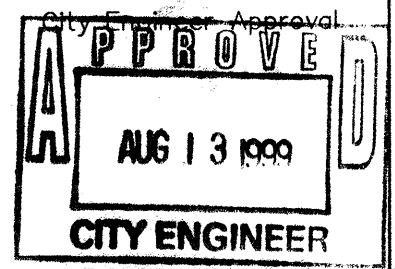
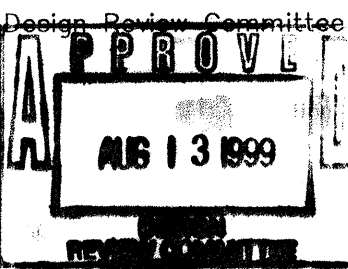
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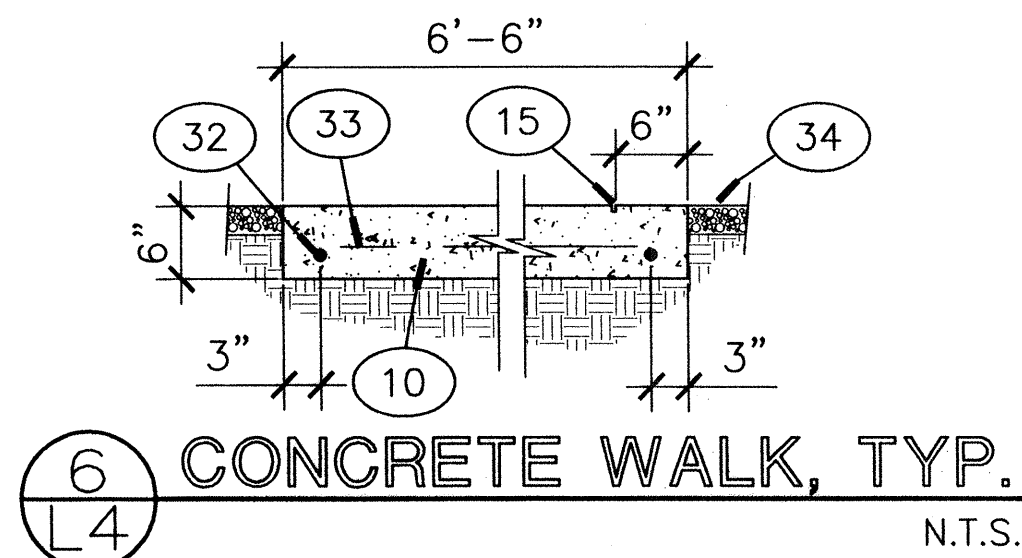
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CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

TITLE: PROJECT: KOREAN WAR VETERANS PARK
SHEET: LAYOUT PLAN-NORTH EAST CORNER



Mo./Day/Yr.	Mo./Day/Yr.



NEW PAVING AND FILL IN EXPANDED PARKING AREA

NOTE: ALL NEW ASPHALTIC CONCRETE THAT IS NOT DESIGNATED TO MATCH EXISTING SECTION WILL BE AS RECOMMENDED BY GEOTECHNICAL SURVEY. ALL PARKING SPACE AREAS WILL BE 2 INCH ASPHALT ON 4 INCH BASE COURSE. ALL PARKING AREA DRIVEWAYS WILL BE 2 INCH ASPHALT CONCRETE ON 6 INCH AGGREGATE BASE COURSE. ALL PARKING AREA WORK SHALL BE DONE AS SPECIFIED IN THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. ASPHALTIC CONCRETE SHOULD CONFORM TO

SECTION 336, EARTHWORK SHOULD BE PERFORMED AS PER DIVISION 200, AND AGGREGATE BASE COURSE SHOULD CONSIST OF CLASS I OR CLASS II MATERIAL AS SPECIFIED IN SECTION 302. BASE COURSE TO BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557. PRIOR TO PLACING FILL OR BASE COURSE THE NATURAL GROUND SHOULD BE STRIPPED OF VEGETATION AND PAVEMENT. THE EXPOSED GROUND SURFACE WILL BE SCARIFIED TO A DEPTH OF 8 INCHES, MOISTURE CONDITIONED TO A NEAR OPTIMUM MOISTURE CONTENT (\pm 3%) AND

COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557. ALL FILL BELOW PAVEMENTS SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557. ALL FILL WITHIN TWO FEET OF FINISH PAVEMENT SUBGRADE SHALL EXHIBIT AN R-VALUE OF 50 OR GREATER.

GENERAL NOTES

- CONTRACTOR TO COORDINATE ALL DRAWINGS PRIOR TO CONSTRUCTION.
- CONTRACTOR TO LOCATE ALL UNDERGROUND LINES PRIOR TO CONSTRUCTION.
- ALL COORDINATES ARE FROM THE NEW MEXICO STATE PLANE, BENCH MARK LOCATION IS X= 388950.78 Y=1479979.92
- SEE ELECTRICAL DRAWINGS FOR PARKING LOT LIGHTING LAYOUT.

NUMBER OF PARKING SPACES

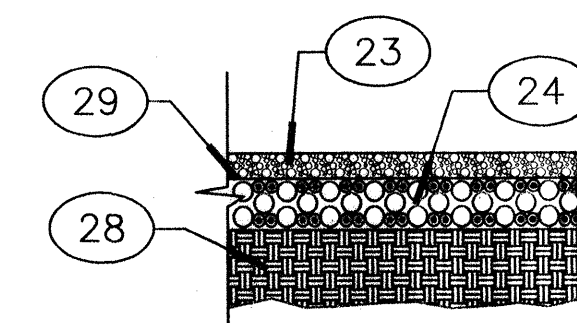
- EXISTING:
 - STANDARD: 48
 - ACCESSIBLE CAR: 2 (NON-COMPLYING)
 - TOTAL: 50
- PROPOSED (INCLUDING EXISTING)
 - STANDARD: 117
 - ACCESSIBLE CAR: 15
 - VAN: 5
 - TOTAL: 137

KEYED NOTES (CONT.)

- EXISTING TO REMAIN, SEE SHEET R1 & S1.
- 8" SUBGRADE, COMPACT TO 95%.
- TACK COAT IF REQUIRED.
- HAND DIG INTIS AREA TO PROTECT EXISTING IRRIGATION LINES. RESTORE LANDSCAPING. SEE SHEET S1.
- MAINTAIN 5.6' MINIMUM CLEARANCE FOR ACCESSIBLE ROUTE BETWEEN EDGE OF WALK AND POLE BASE AS SHOWN.
- #4 BAR CONTINUOUS.
- 10/10 WELDED WIRE MESH.
- ADJACENT ASPHALTIC SURFACE, FLUSH W/ CONC.
- ALIGN CONTROL JOINT IN SIDEWALK WITH EDGE OF PLAZA ENTRY AREA CONCRETE AS SHOWN.

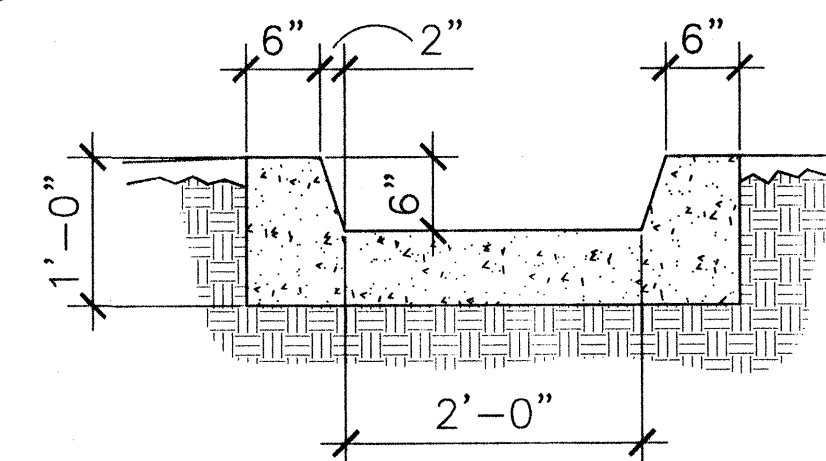
LEGEND

MATCH ALTERNATING HEAVY BROOM FINISH PATTERN FROM DETAIL 4/D3. THIS AREA ONLY.

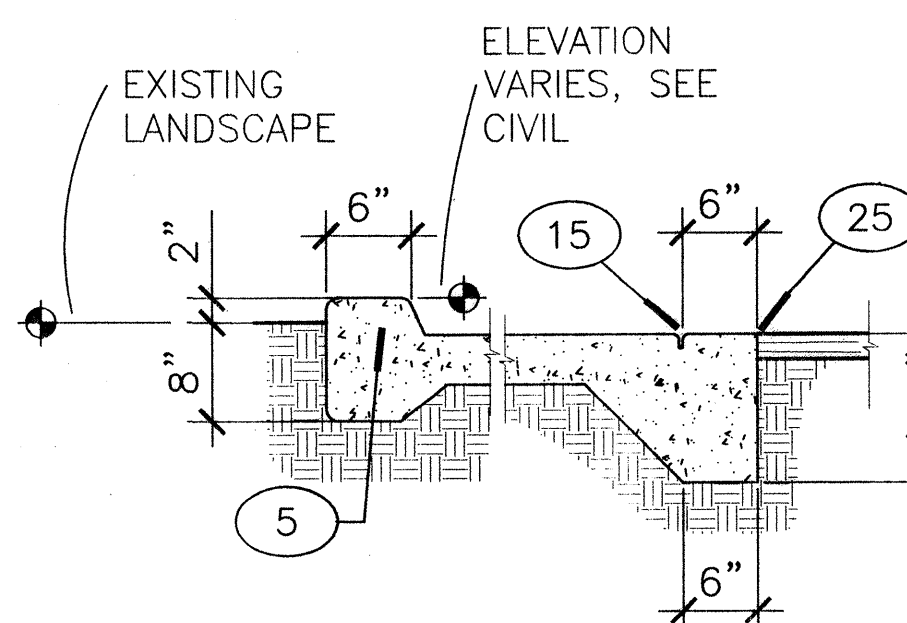


NOTE: ALL ASPHALTIC CONCRETE AND PAVING MATERIALS TO MEET "CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1986 THRU UPDATE 6 EDITION" SPECIFICATIONS FOR RESIDENTIAL TRAFFIC.

4 ASPHALT SECTION N.T.S.



3 RUN-DOWN N.T.S.



2 SIDEWALK DETAIL N.T.S.



COORDINATES

PT.1	X=389085.39	Y=1479145.18
PT.2	X=389116.93	Y=1479105.09
PT.3	X=389263.42	Y=1479049.17
PT.4	X=389268.22	Y=1479049.82
PT.5	X=389339.81	Y=1479000.77
PT.6	X=389180.49	Y=1479078.02
PT.7	X=389195.39	Y=1479059.71
PT.8	X=389212.07	Y=1479041.45
PT.9	X=389233.80	Y=1479020.53
PT.10	X=389257.82	Y=1479000.54
PT.11	X=389274.60	Y=1478988.21
PT.12	X=389301.71	Y=1478970.79
PT.13	X=389355.66	Y=1478912.77
PT.14	X=389159.81	Y=1478936.45
PT.15	X=389267.03	Y=1478872.01
PT.16	X=389372.39	Y=1478937.46

KEYED NOTES

- EXISTING SEWER LINE CLEAN-OUT, VERIFY LOCATION IN FIELD. SEE SHEET S1.
- EXISTING 4" CAST IRON SEWER LINE TO BE REMOVED AND REPLACED WITH A 6" LINE. SEE SHEET S1.
- NEW CLEANOUT AT TRANSITION BETWEEN NEW 6" LINE TO EXISTING SEWER LINE FROM BUILDING. SEE SHEET S1.
- LIMIT OF NEW SIDEWALK CONSTRUCTION. ALIGN FLUSH WITH EXISTING. MATCH FINISH OF ADJACENT EXISTING CONCRETE WALK.
- CONTINUOUS CONC. SIDEWALK TURN-UP. LOCATE OUTSIDE FACE OF CURB AT CURRENT SIDEWALK-TO-LANDSCAPE EDGE. SEE CIVIL FOR T.O.C. ELEVATION. MAINTAIN TOP OF CURB AT 2" ABOVE EXISTING GRADE.
- NEW CONC. SIDEWALK W/ TURNDOWN EDGE.
- CONCRETE WHEEL STOP TYP., PLACE AS SHOWN.
- SLOPED SIDEWALK, SEE CIVIL.
- TOP EDGE OF SLOPED SIDEWALK, FLUSH WITH NEW SIDEWALK EDGE.
- 6" 4000 PSI CONCRETE WALK WITH 6" X 6" -10/10 WWM AND #4 BAR, CONT. IN EDGE. ALL EDGES TO BE FLUSH WITH ADJACENT SURFACES.
- STANDARD CURB & GUTTER, SEE C.O.A. DWG. 2415.
- TRANSITION TO EXISTING CURB AND GUTTER.
- 6" HEADER CURB, SEE C.O.A. DWG. 2415. SEE CIVIL FOR ELEVATIONS.
- 6" HEADER CURB, SEE C.O.A. DWG. 2415. FLUSH WITH ADJACENT SIDEWALK.
- 1/4" TOOLED CONTROL JOINT. TYPICAL FOR ENTIRE LENGTH OF NEW SIDEWALK. SEE PLAN.
- TRANSITION TO DEPRESSED CURB & GUTTER.
- MEDIAN CURB & GUTTER, SEE C.O.A. DWG. 2415.
- DEPRESSED CURB & GUTTER, SEE C.O.A. DWG. 2415.
- CONCRETE RUN-DOWN, SEE DETAIL 3/L4. FLUSH EDGES TO ADJACENT CONC. GUTTER EDGES.
- DOUBLE "D" STORM INLET, SEE C.O.A. DWG. 2206. ALIGN WITH ADJACENT GUTTER EDGES AS SHOWN. SEE CIVIL FOR PIPE ROUTING.
- LAY-OUT CURVE. CREATE USING COORDINATE POINTS GIVEN. SAME CURVE TO BE OFFSET AS SHOWN TO GIVE OVERALL PARKING LOT CONFIGURATION. THIS LINE IS SOLELY FOR LAYOUT PURPOSES.
- THIS SECTION OF NEW ASPHALT PAVING (SHOWN SHADED) IS TO MATCH THE EXISTING ASPHALT SECTION TO REMAIN. SEE 4/L4 FOR EXISTING ASPHALT SECTION.
- 2" ASPHALTIC CONCRETE SURFACE COURSE, 1,500 LBS. STABILITY.
- 4" BASE COURSE AGGREGATE COMPACT TO 95%.
- TOP OF CONCRETE SIDEWALK TURN-DOWN EDGE TO BE FLUSH WITH TOP OF ASPHALT.
- LIGHT POLE TYP. LOCATE FROM THIS DRAWING. SEE ELECTRICAL FOR TYPE AND ELECTRICAL REQUIREMENTS.

Kells + Craig

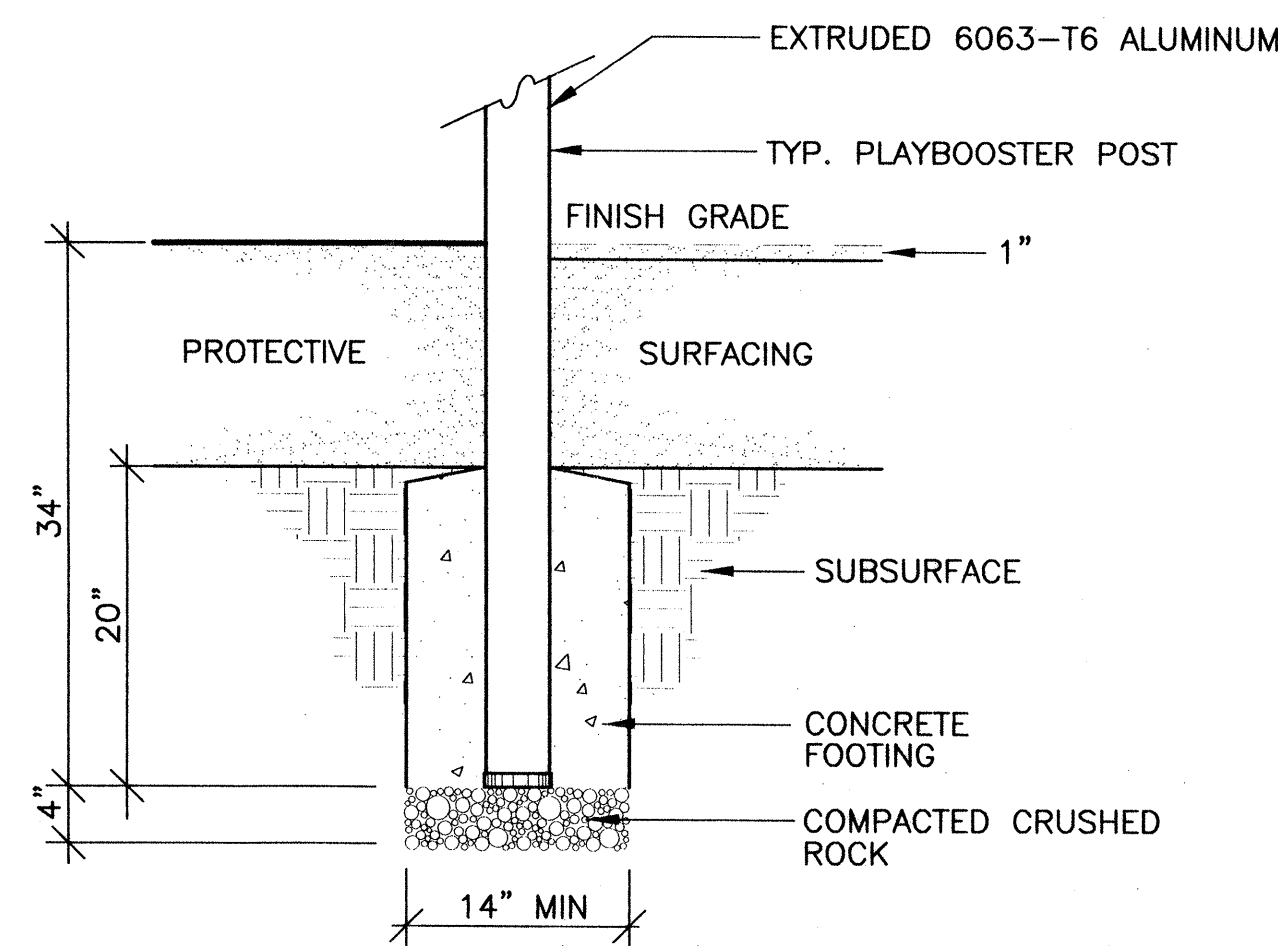
400 Gold S.W.
Suite 880
Albuquerque, New Mexico 87102

Architects, Inc. AIA
(505) 243-2724

CITY OF ALBUQUERQUE
C.I.P.

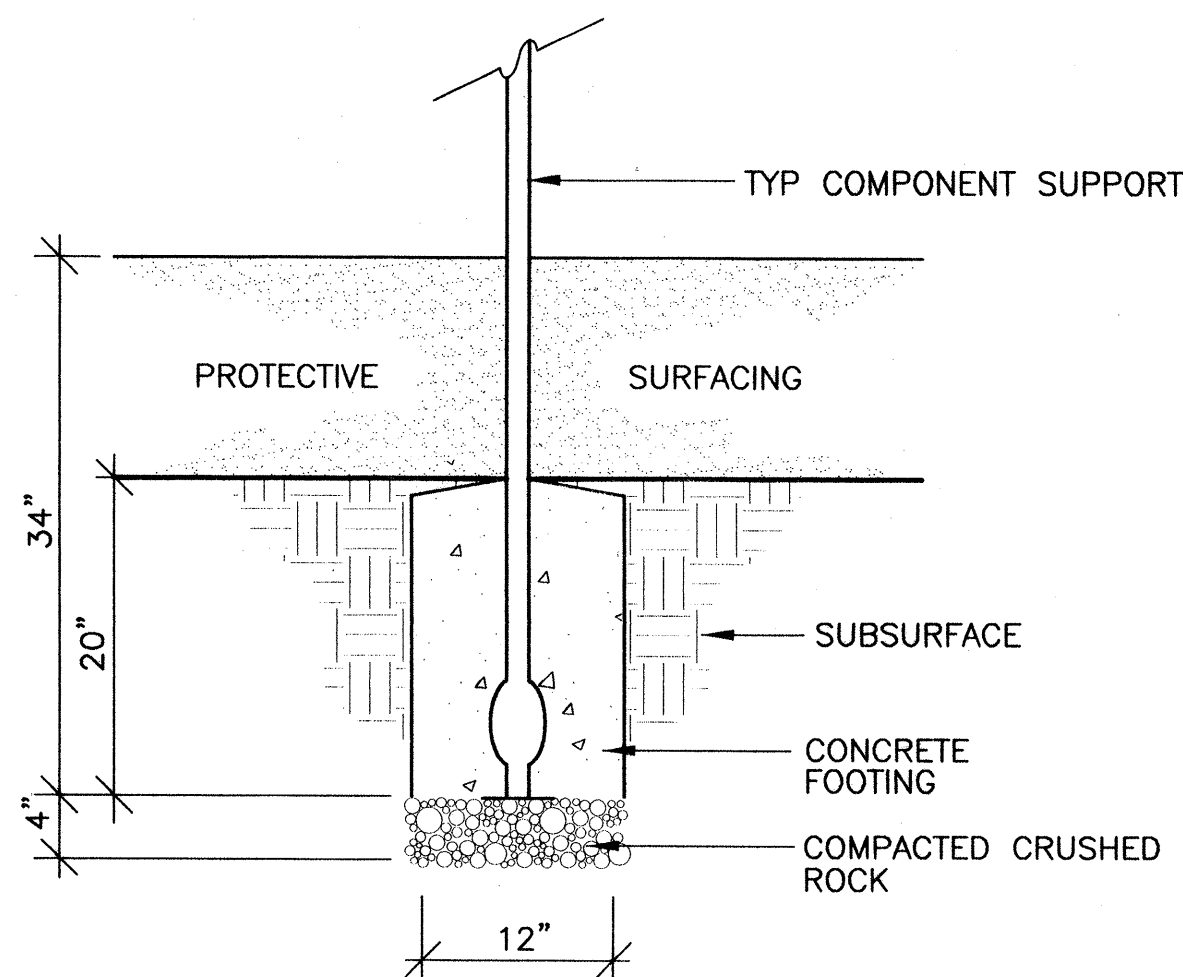
TITLE: Korean War Veteran's Park Phase II
PROJECT SHEET: LAYOUT PLAN & DETAILS PARKING AREA.

Design Review Committee	City Engineer Approval	NO. DATE/YR.	NO. DATE/YR.
APPROVED AUG 13 2008	APPROVED AUG 13 2008		
DESIGN REVIEW COMMITTEE	CITY ENGINEER		
City Project No.	Zone Map No.	Sheet	Of
5020.92	L-16-Z	L4	28



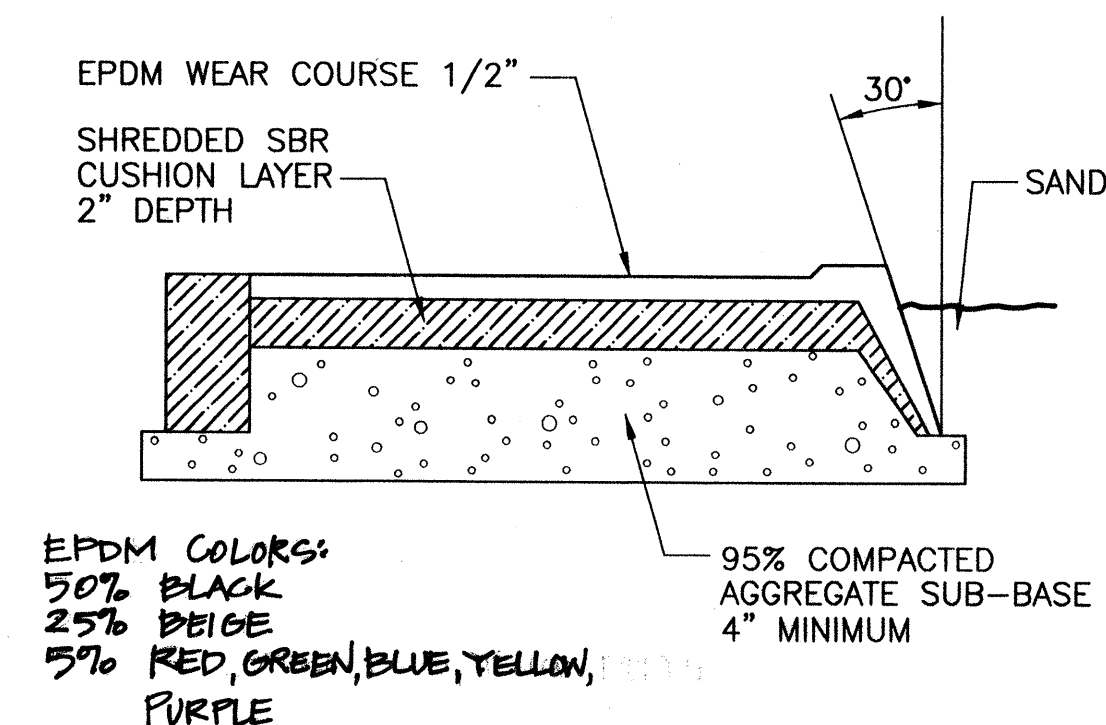
SECTION

1 TYPICAL POST CONCRETE FOOTING
L5 1"=1'-0"



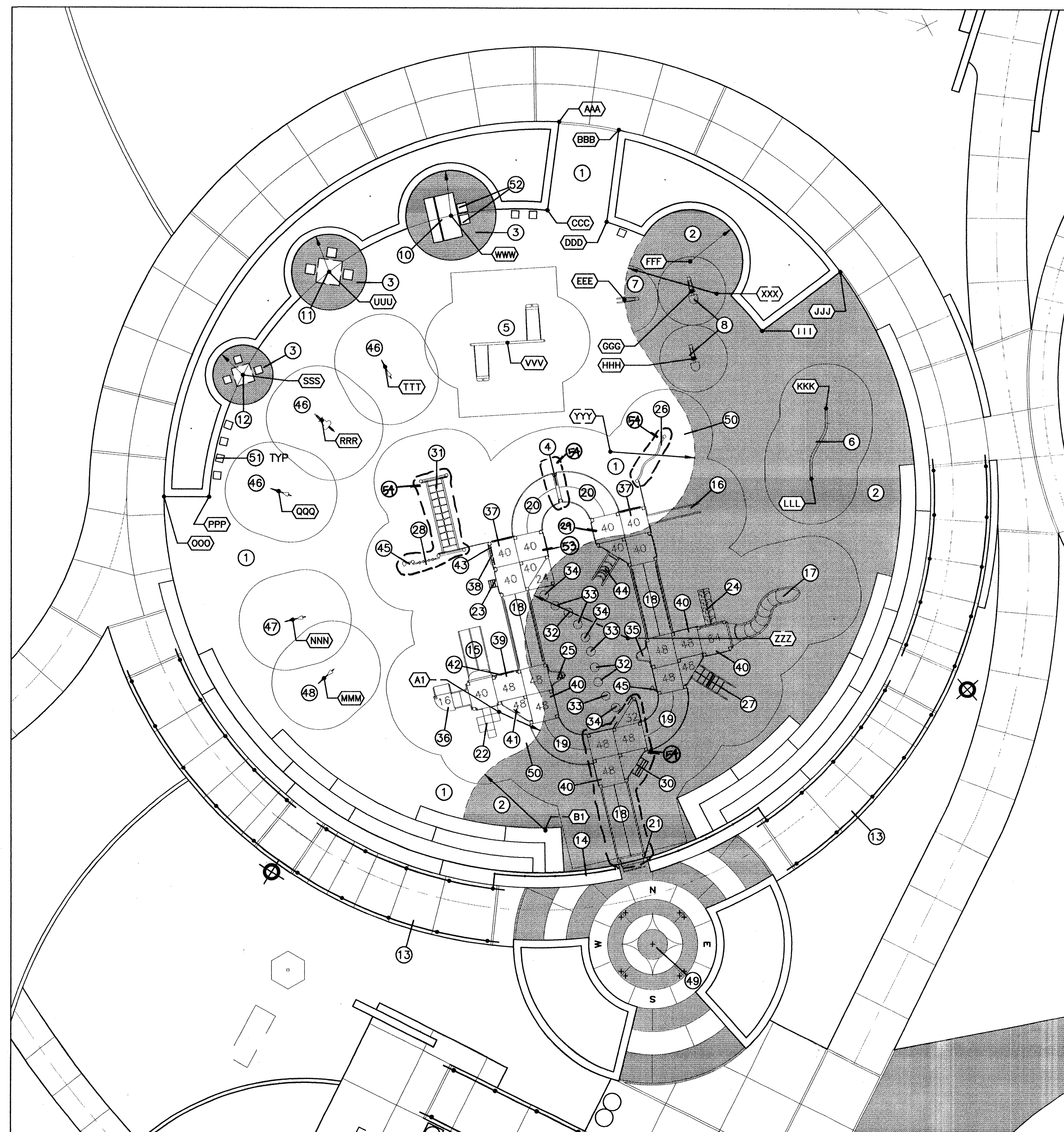
SECTION

2 COMPONENT CONCRETE FOOTING
L5 1"=1'-0"



SECTION

3 MONOLITHIC, RESILIENT SURFACING
L5 NTS




$$3/4'' = 1' - 0'$$

$$3/4'' = 1' - 0''$$

$$1/2'' = 1' - 0''$$

$$3/4'' = 1' - 0''$$

$$3/4'' = 1' - 0'$$

$$1/2'' = 1' - 0''$$

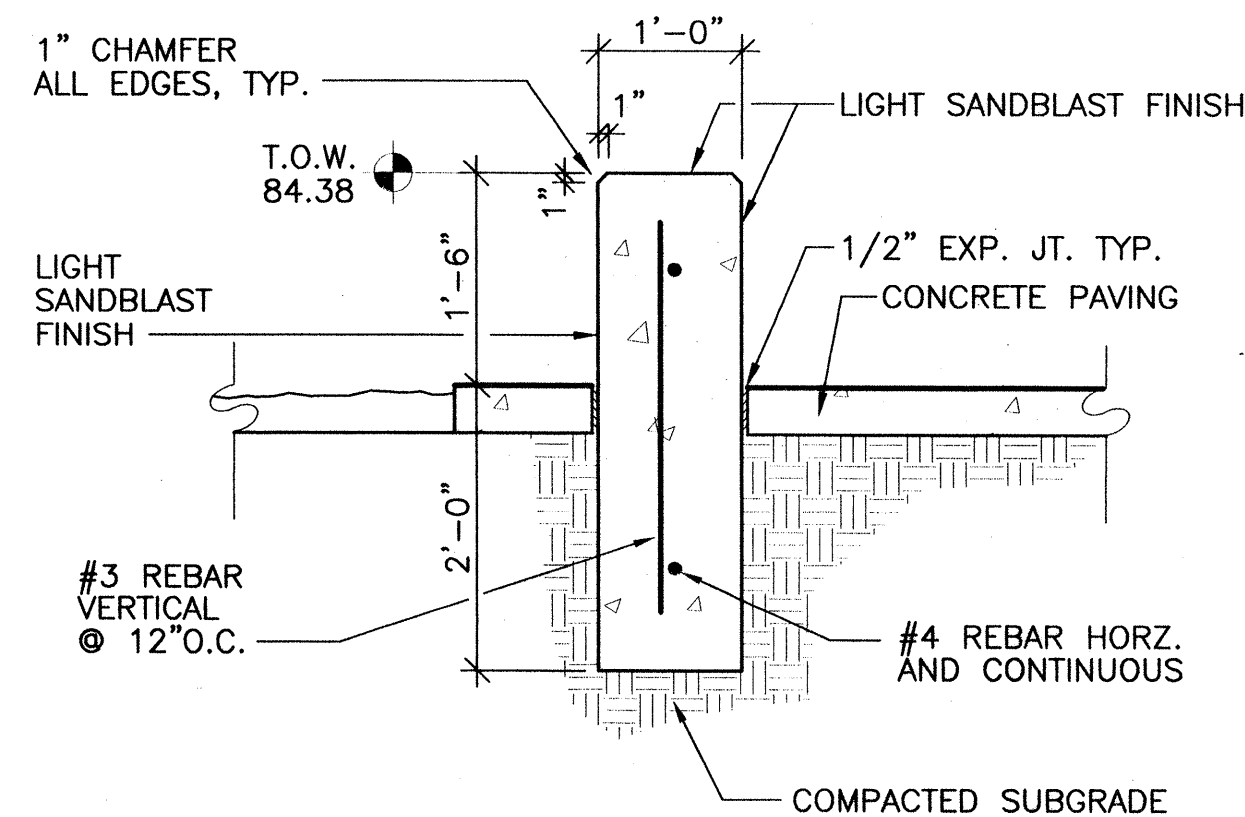
$$3/4'' = 1' - 0''$$

$$1/2'' = 1' - 0''$$

(505) 243-2724

5020.92	L-16-Z
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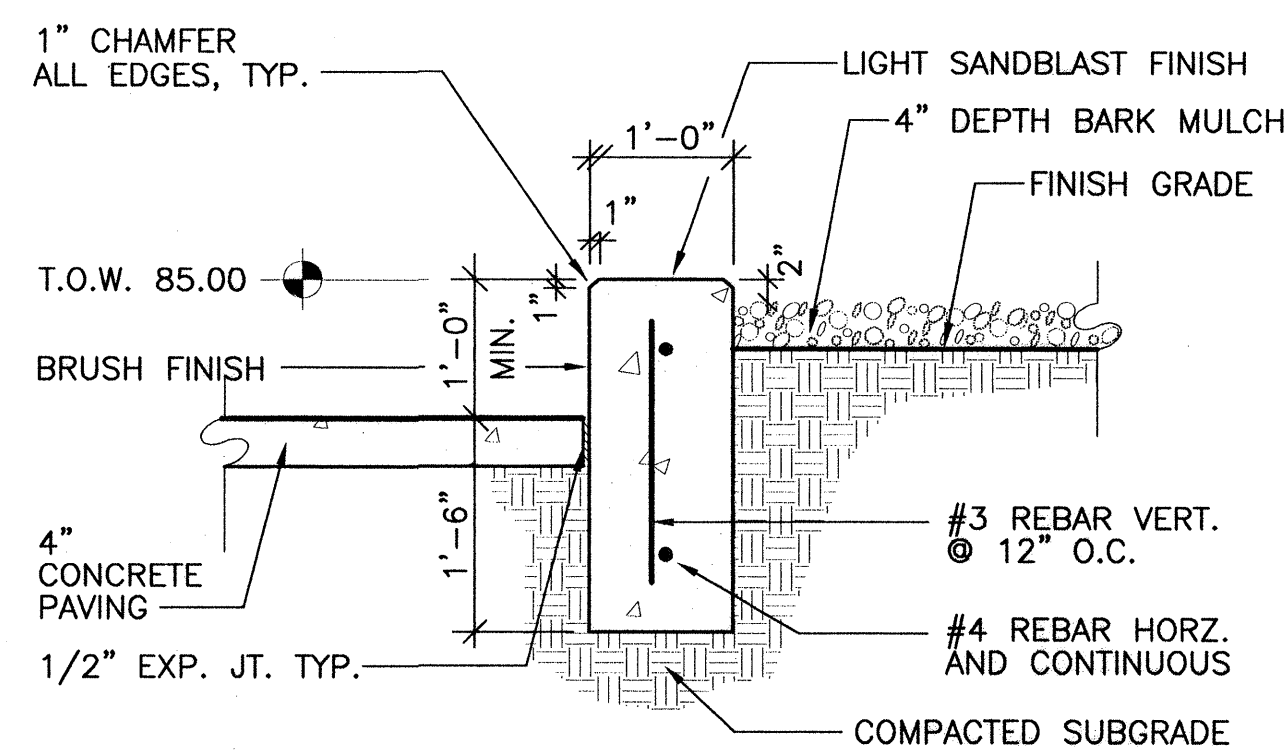
PROGRAM	
ERANS PARK STAIRS	
Mo./Day/Yr.	Mo./Day/Yr.
Sheet	Of
D1	28



NOTES:
 1. COLORED CONCRETE: DAVIS COLOR BRICK RED, CONCRETE SEAT WALL ONLY.
 2. FORM TIE MARKINGS TO BE EVENLY SPACED.
 3. 4000 PSI CONCRETE: USE 4LBS. PIGMENT PER SACK OF CEMENT. PIGMENT NUMBER 160.

SECTION

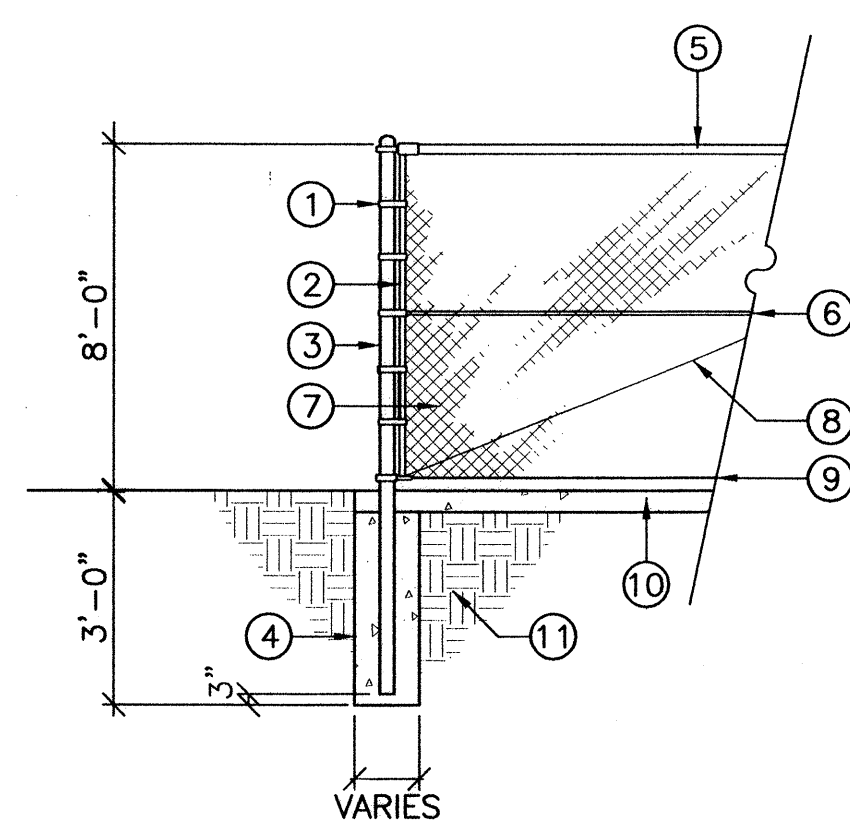
1 CONCRETE SEAT WALL
 D2 3/4"=1'-0"



NOTES:
 1. FORM TIE MARKINGS TO BE EVENLY SPACED.
 2. SEE DETAIL 1 SHT. D5 FOR ELEVATIONS AND GRADING DETAILS.

SECTION

2 CONCRETE PLANTER WALL AT PLAY AREA
 D2 3/4"=1'-0"



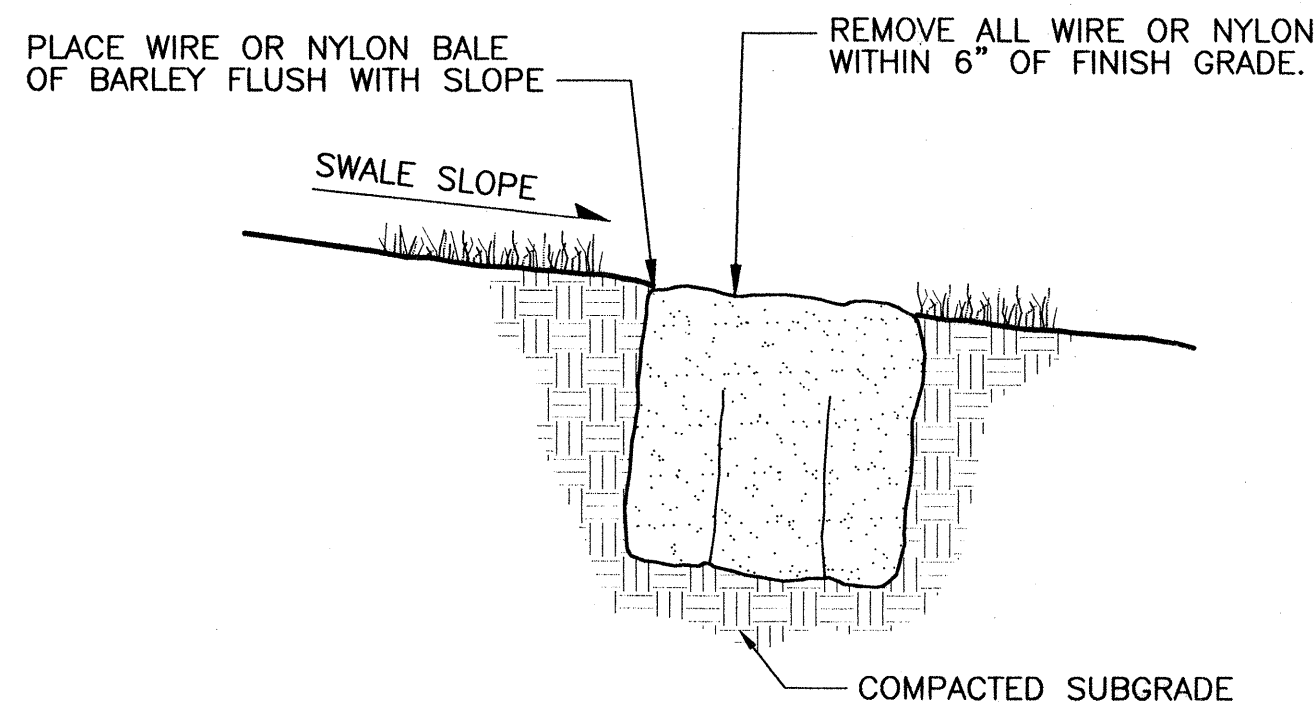
FENCE
 ① TENSION BAND 15" O.C. MAX.
 ② 3/16" X 5/8" X 40" STRETCH BAR.
 ③ CORNER/END POST FOOTING.
 ④ CONCRETE FOOTING.
 ⑤ 1 5/8" O.D. TOP RAIL WITH TIES @ 12" O.C.
 ⑥ COMPRESSION BRACE.
 ⑦ 9 GA. X 2" VINYL CLAD MESH FABRIC. TOP AND SELVAGES KNUCKLED UNDER AND WRAPPED FOR SAFETY. (9" GA. BEFORE CLADDING).
 ⑧ TRUSS ROD WITH TURNBUCKEL.
 ⑨ 7 GA. BOTTOM TENSION WIRE WITH HOG RINGS. HOG RINGS AT 12" O.C. AT BOTTOM.
 ⑩ RETAINING CURB, SEE DETAIL THIS SHEET.
 ⑪ COMPACTED SUBGRADE.

NOTES:
 1. FOOTING DEPTH TO INCLUDE RETAINER CURB/MOWSTRIP.
 2. ALL FABRIC, POST AND RAILS TO BE (?) VINYL CLAD PER SPECIFICATIONS.

FENCE HEIGHT	LINE POST SIZE	LINE POST FOOTING	CORNER/END POST SIZE	CORNER/END POST FOOTING
UP TO 6'	1.9" O.D.	24" X 8"	2.375" O.D.	24" X 10"

SECTION

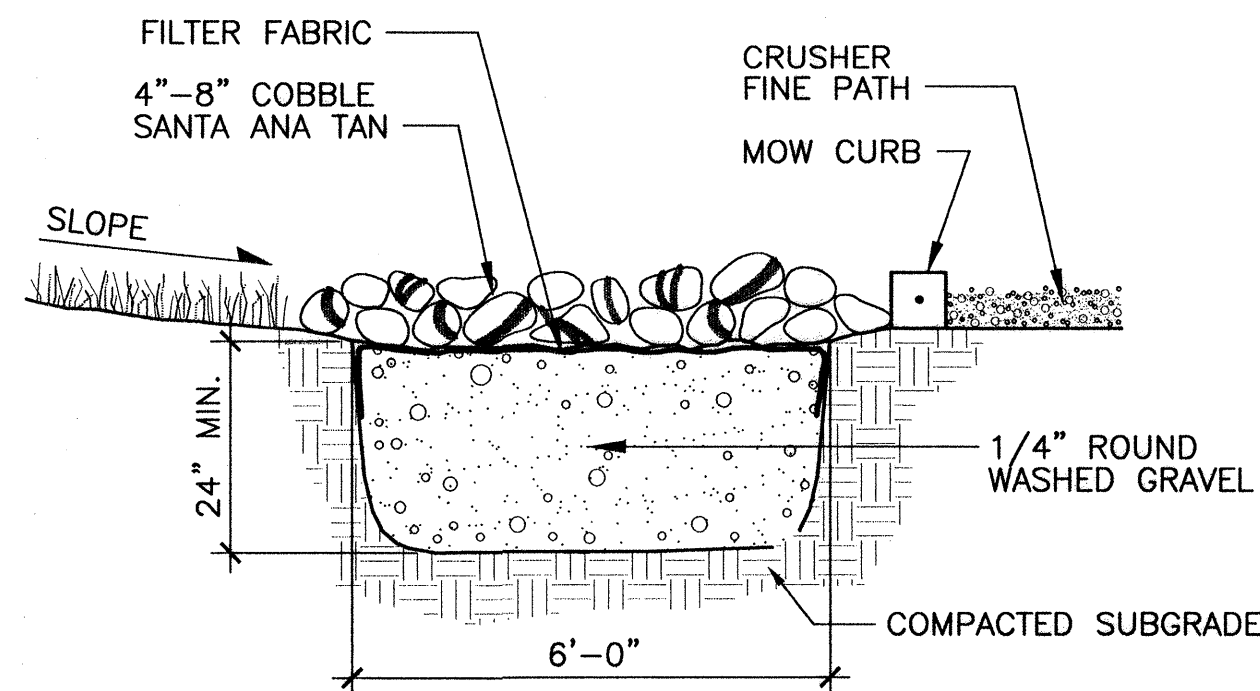
3 VINYL CLAD CHAIN LINK FENCE
 D2 NTS



NOTES:
 1. THOROUGHLY SOAK BALE AT INSTALLATION.

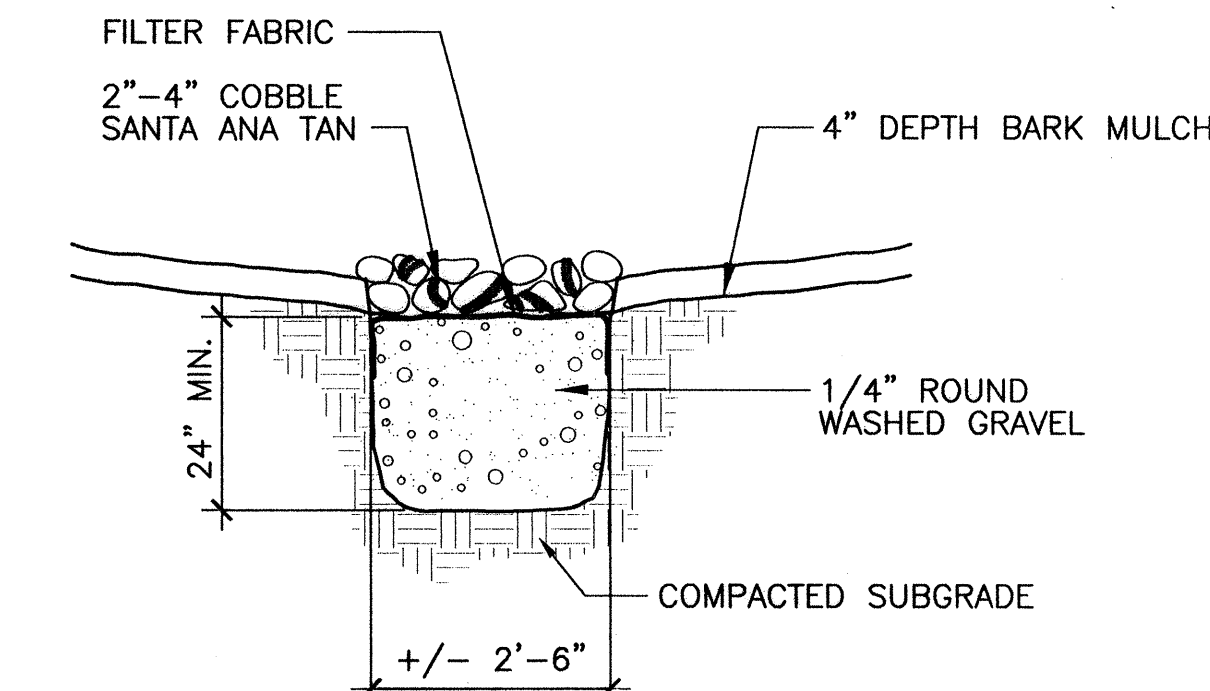
SECTION

4 HAYBALE SWALE IN NATIVE GRASS AREA
 D2 NTS



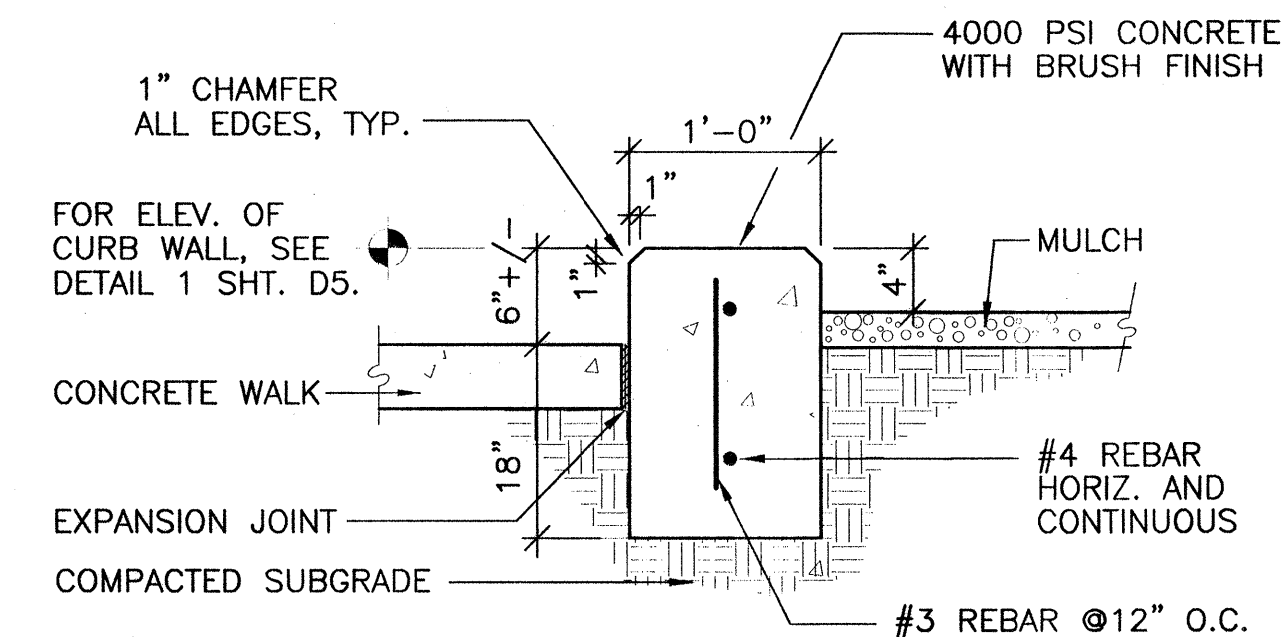
SECTION

5 SUMP AT STRAW BALE SWALE
 D2 3/8"=1'-0"



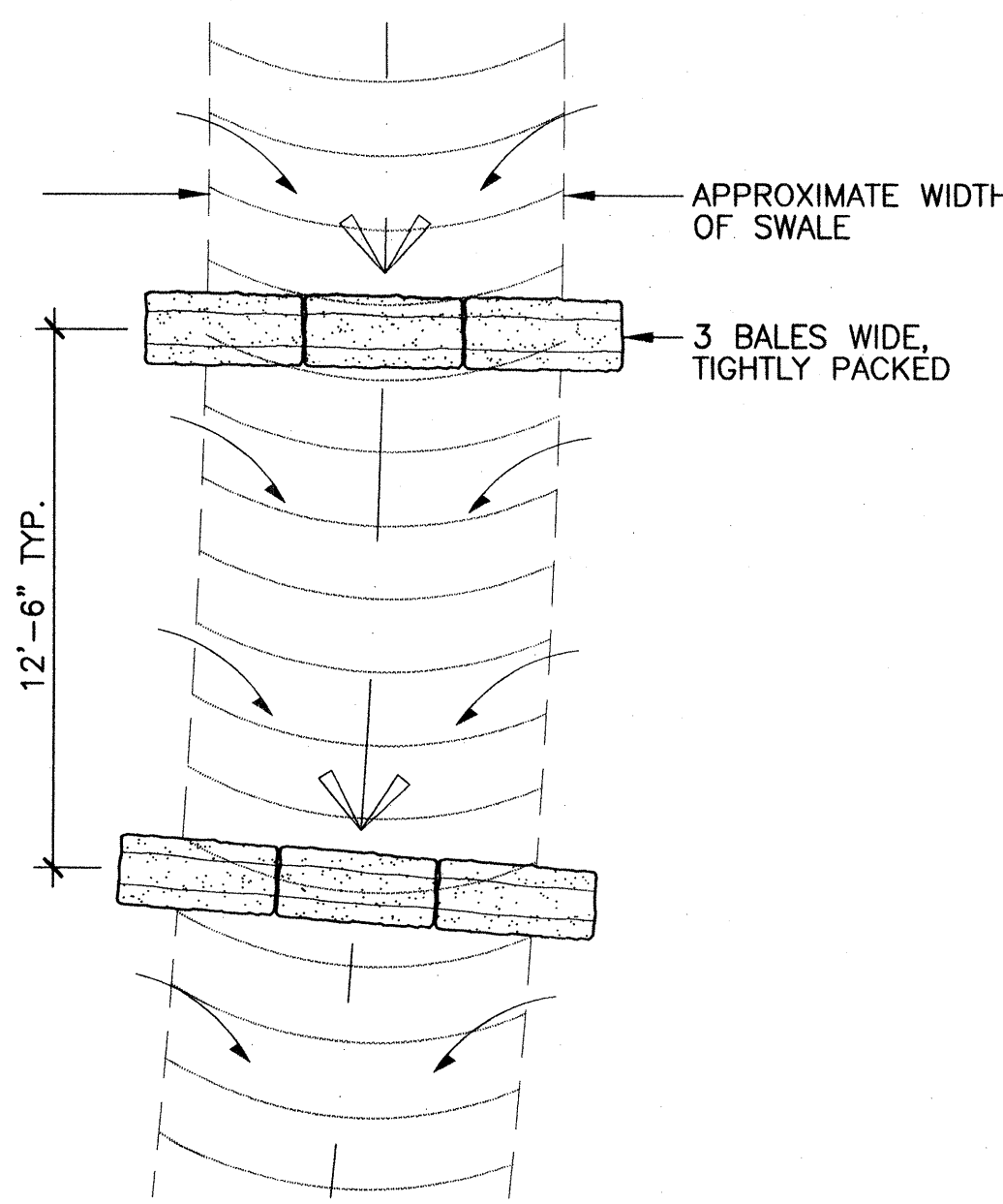
SECTION

6 COBBLE SWALE/INFILTRATION FEATURE
 D2 1/2"=1'-0"



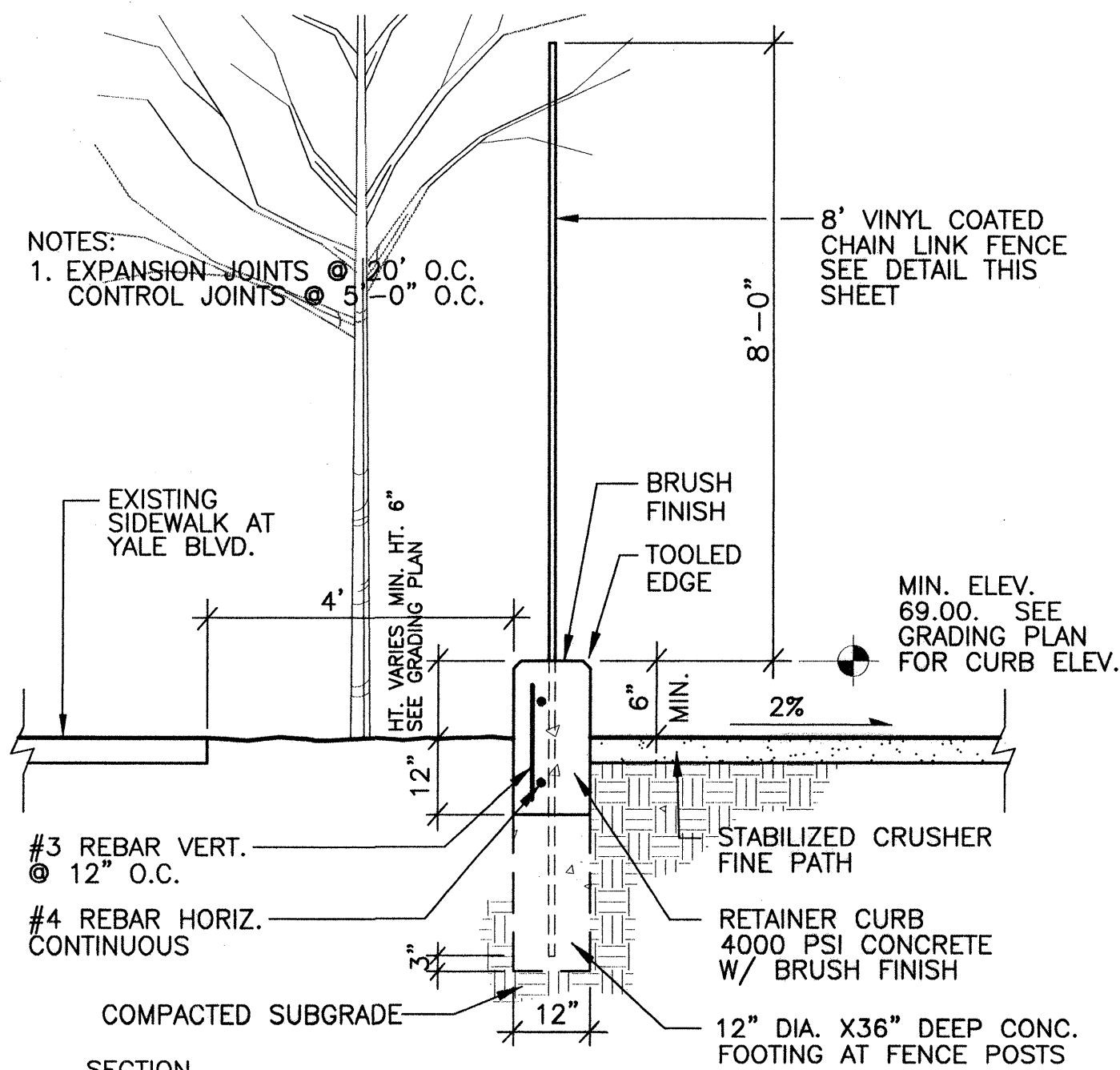
SECTION

7 CONCRETE PLANTER CURB
 D2 1"=1'-0"



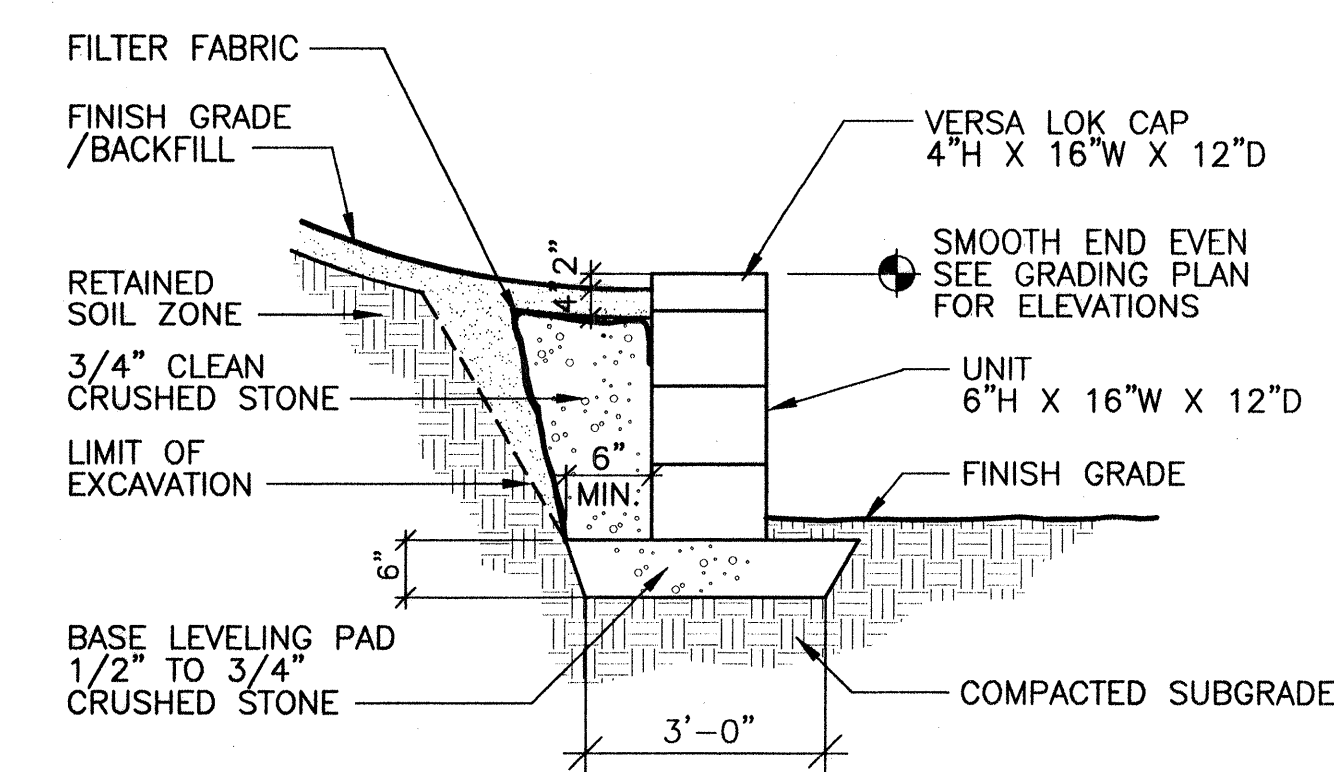
PLAN

8 HAYBALE SWALE
 D2 NTS



SECTION

9 RETAINER CURB AND 8' CHAIN LINK FENCE
 D2 1/2"=1'-0"



SECTION

10 STACKED CONCRETE BLOCK
 D2 NTS

UNITS ARE TO BE PRECAST CONCRETE MODULAR UNITS AS MFG. BY VERSA-LOK AVAILABLE FROM WESTERN MOBILE. INSTALL PER MFG. SPECIFICATIONS. COLOR: DESERT SAND.

DESIGNWORKSHOP
 901 Rio Grande NW
 Suite E130
 Albuquerque, NM 87104
 (Tel.) 505.243.8333
 (Fax) 505.243.8337

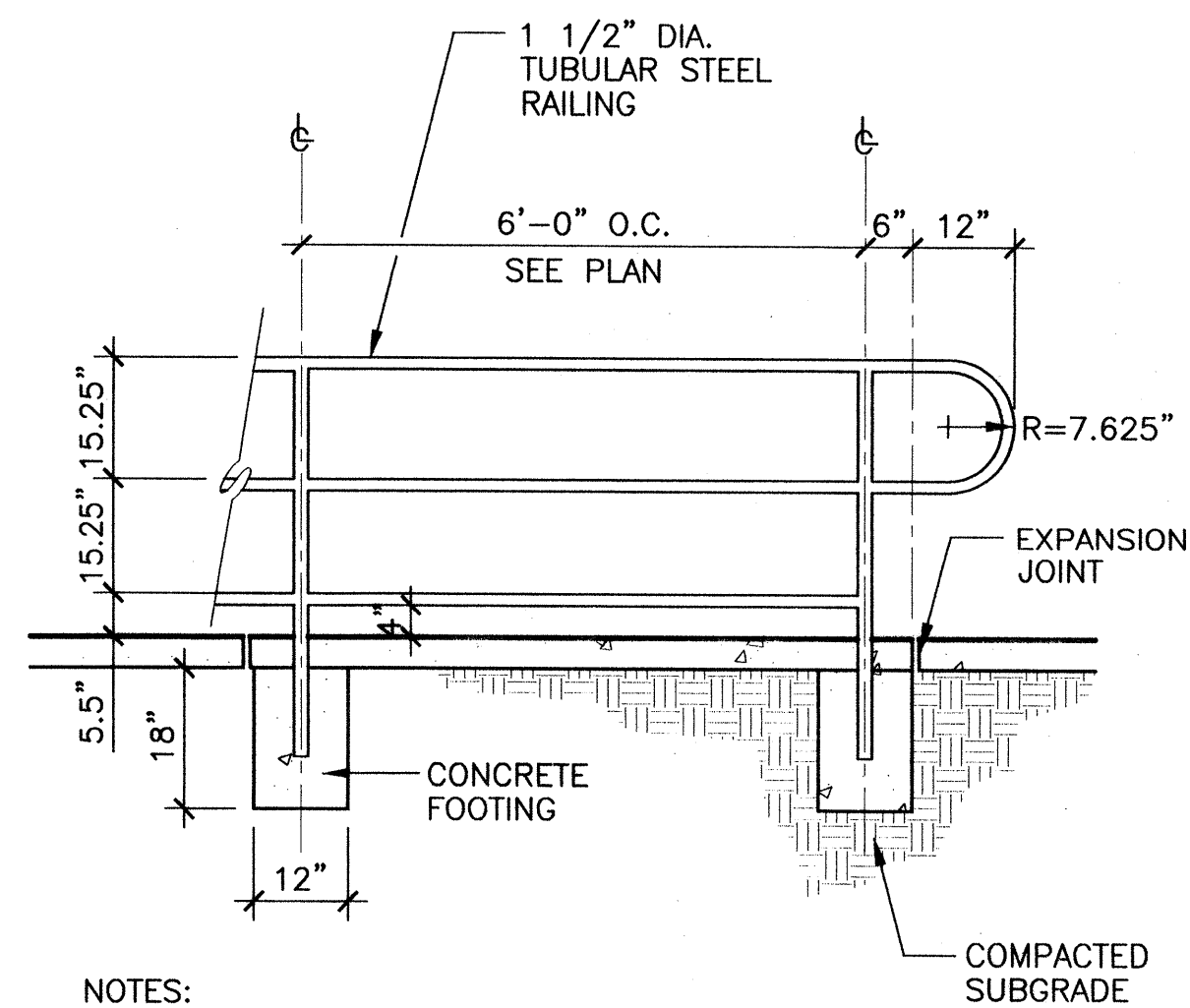
Kells and Craig
 400 Gold SW.
 Suite 880
 Albuquerque, New Mexico 87102
 Architects, Inc. AIA
 (505) 243-2724

CITY OF ALBUQUERQUE
 CAPITAL IMPLEMENTATION PROGRAM

TITLE: PROJECT: KOREAN WAR VETERANS PARK
 SHEET: DETAILS-WALLS, FENCE, & SWALE

City Project No. 5020.92
 Zone Map No. L-16-Z
 Sheet D2 of 28

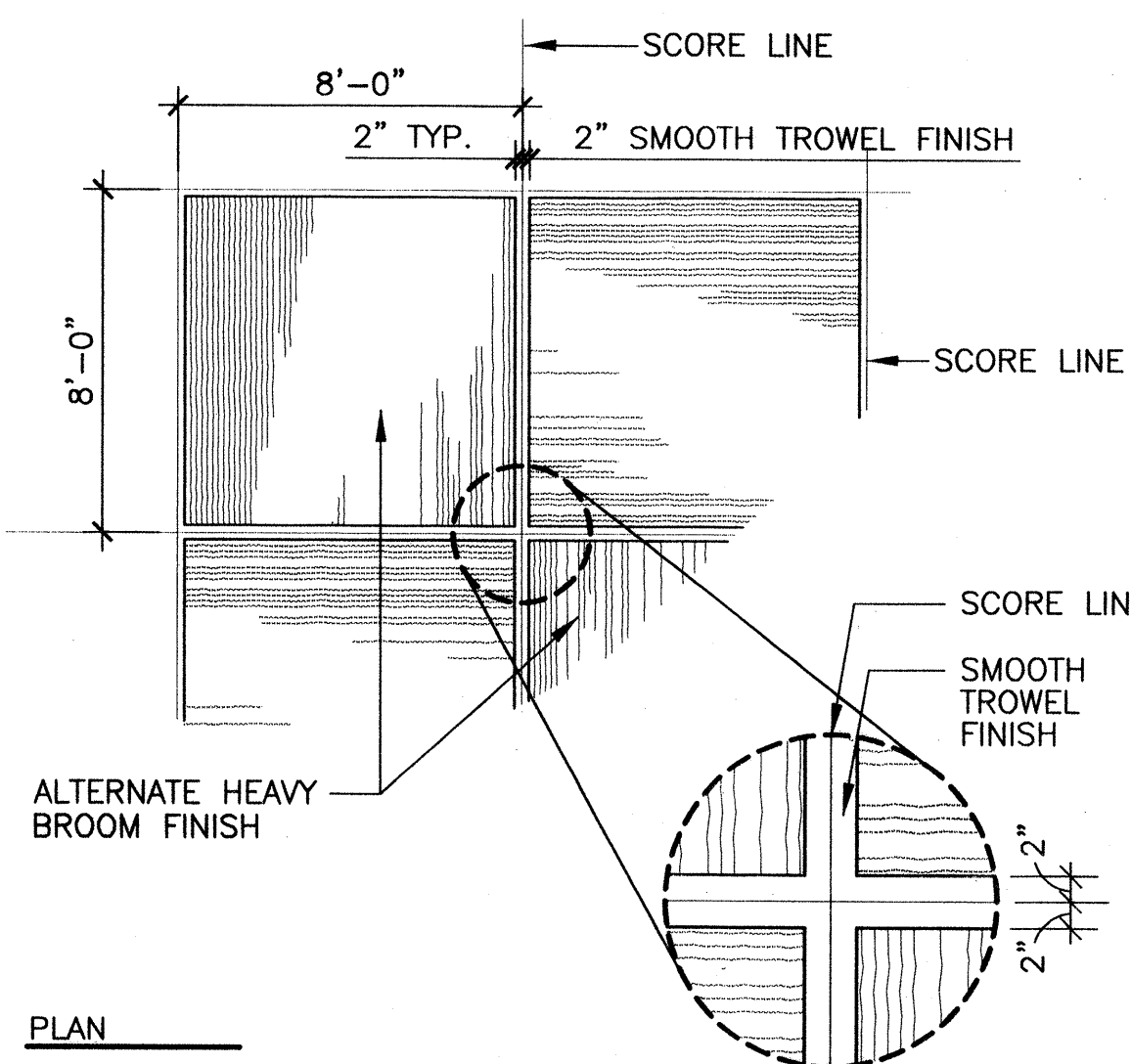
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INSPECTOR'S	NO. 2	DATE	7/97	INSPECTOR'S	NO. 2	DATE	7/97	INSPECTOR'S	NO. 1	DATE	8/95	INSPECTOR'S	NO. 1	DATE	8/95
REVISIONS	NO. 1	DATE	8/95	REVISIONS	NO. 2	DATE	7/97	REVISIONS	NO. 1	DATE	8/95	REVISIONS	NO. 1	DATE	8/95
DESIGNED BY	ASM	DATE	4-99	DESIGNED BY	ASM	DATE	4-99	DESIGNED BY	ASM	DATE	4-99	DESIGNED BY	ASM	DATE	4-99
DRAWN BY	WSP	DATE	4-99	DRAWN BY	WSP	DATE	4-99	DRAWN BY	WSP	DATE	4-99	DRAWN BY	WSP	DATE	4-99
CHECKED BY	WSP	DATE	4-99	CHECKED BY	WSP	DATE	4-99	CHECKED BY	WSP	DATE	4-99	CHECKED BY	WSP	DATE	4-99



NOTES:
1. GRIND ALL WELDS SMOOTH.

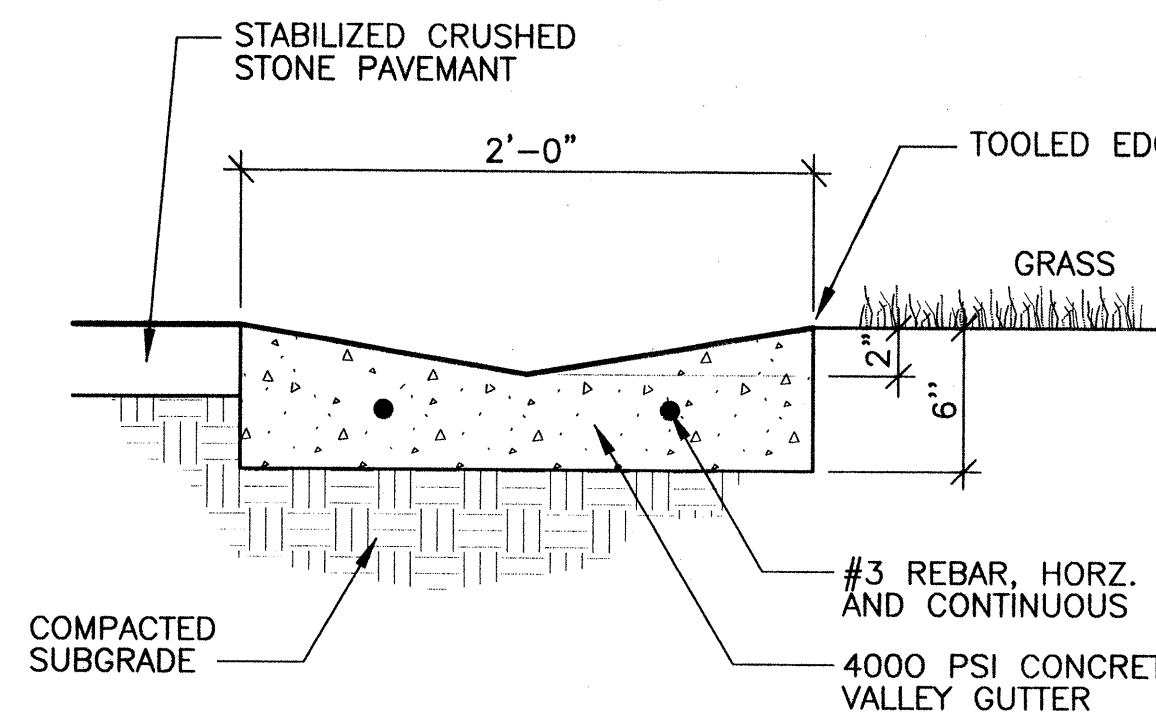
SECTION

1 RAILING AT PATIO/PICNIC AREA
D3 1/2"=1'-0"



PLAN

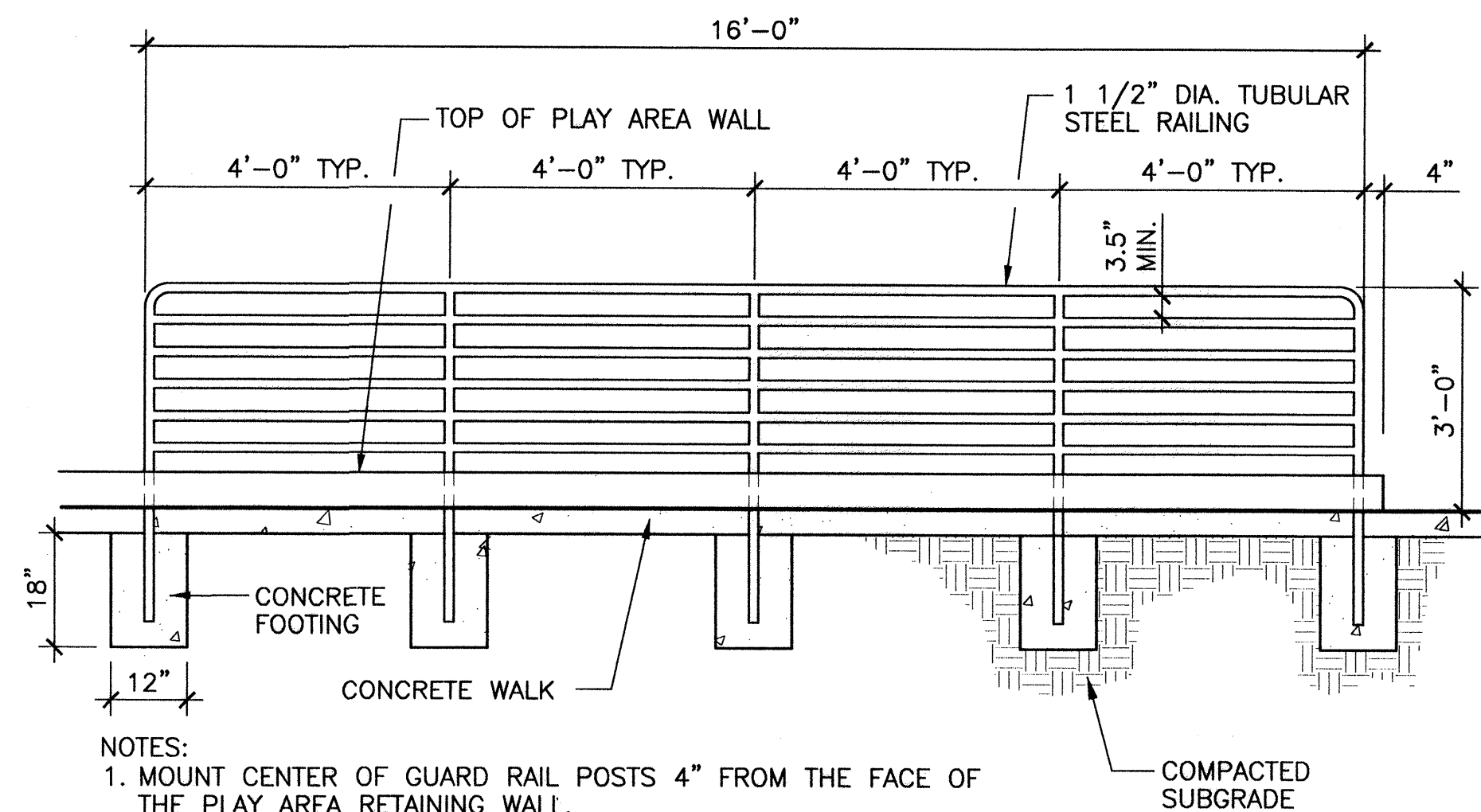
4 PATIO PAVING DETAIL
D3 NTS



NOTES:
1. CONTROL JOINTS SHALL BE PLACED AT 5'-0" O.C.
2. EXPANSION JOINTS SHALL BE PLACED AT 20'-0" O.C. AND WHERE THE VALLEY GUTTER ABUTS ANOTHER HARD SURFACE.
3. TOP OF VALLEY GUTTER SHALL BE LEVEL WITH THE FINISH GRADE.

SECTION

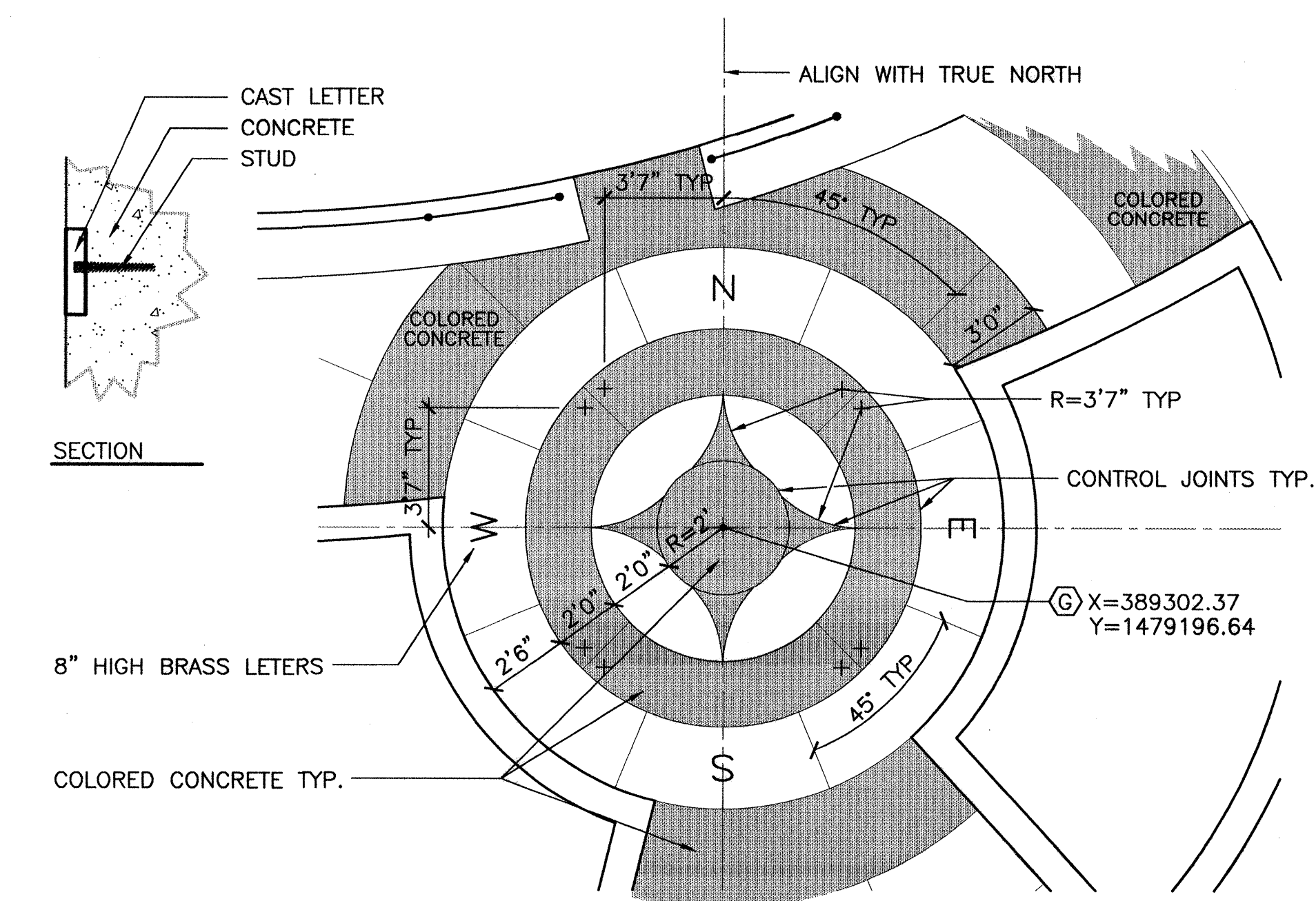
8 LANDSCAPE VALLEY GUTTER
D3 1 1/2"=1'-0"



NOTES:
1. MOUNT CENTER OF GUARD RAIL POSTS 4" FROM THE FACE OF THE PLAY AREA RETAINING WALL.
2. CONNECT GUARD RAIL TO RAMP HANDRAIL WITH A 90° CORNER. SEE PLAN OF THIS AREA ON SHT. L5 FOR POST LOCATIONS.
3. GRIND ALL WELDS SMOOTH.

SECTION

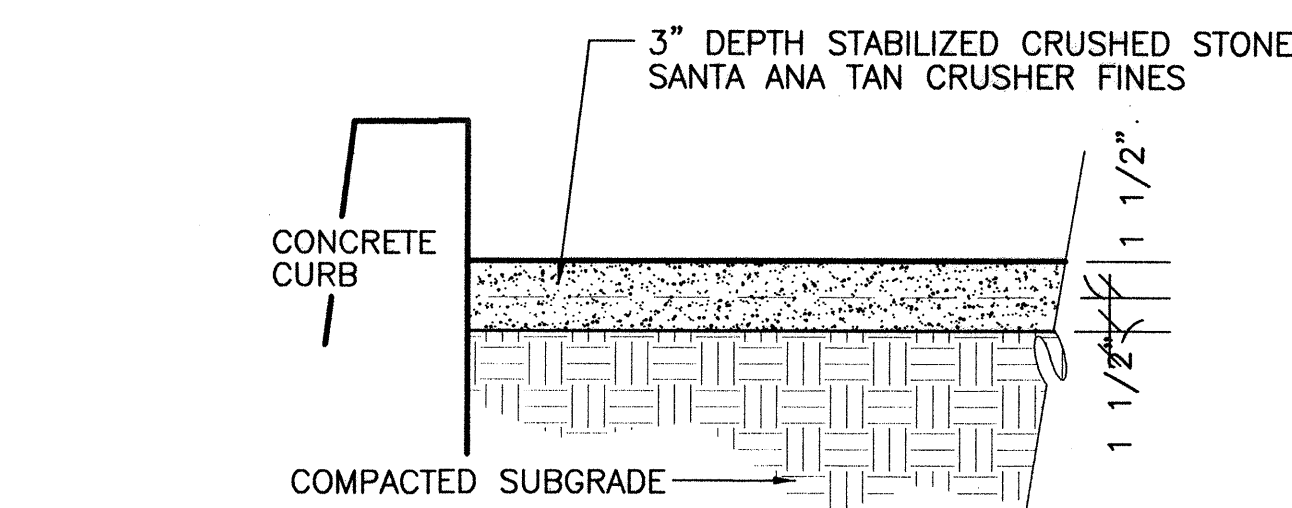
2 GUARD RAIL
D3 1/2"=1'-0"



NOTES:
1. COLORED CONCRETE, DAVIS COLOR BRICK RED, 4000 PSI CONCRETE. USE 4 LBS. PER SACK OF CEMENT. PIGMENT NO. 160.
2. BRASS LETTERS TO SET FLUSH WITH FINISHED CONCRETE. SEE INSET DETAIL. LETTERS ARE TO BE YELLOW BRASS (CDA 406) WITH A MIRROR FINISH (YF-6). LETTER STYLE: 8" UNIVERSITY ROMAN 134.

PLAN

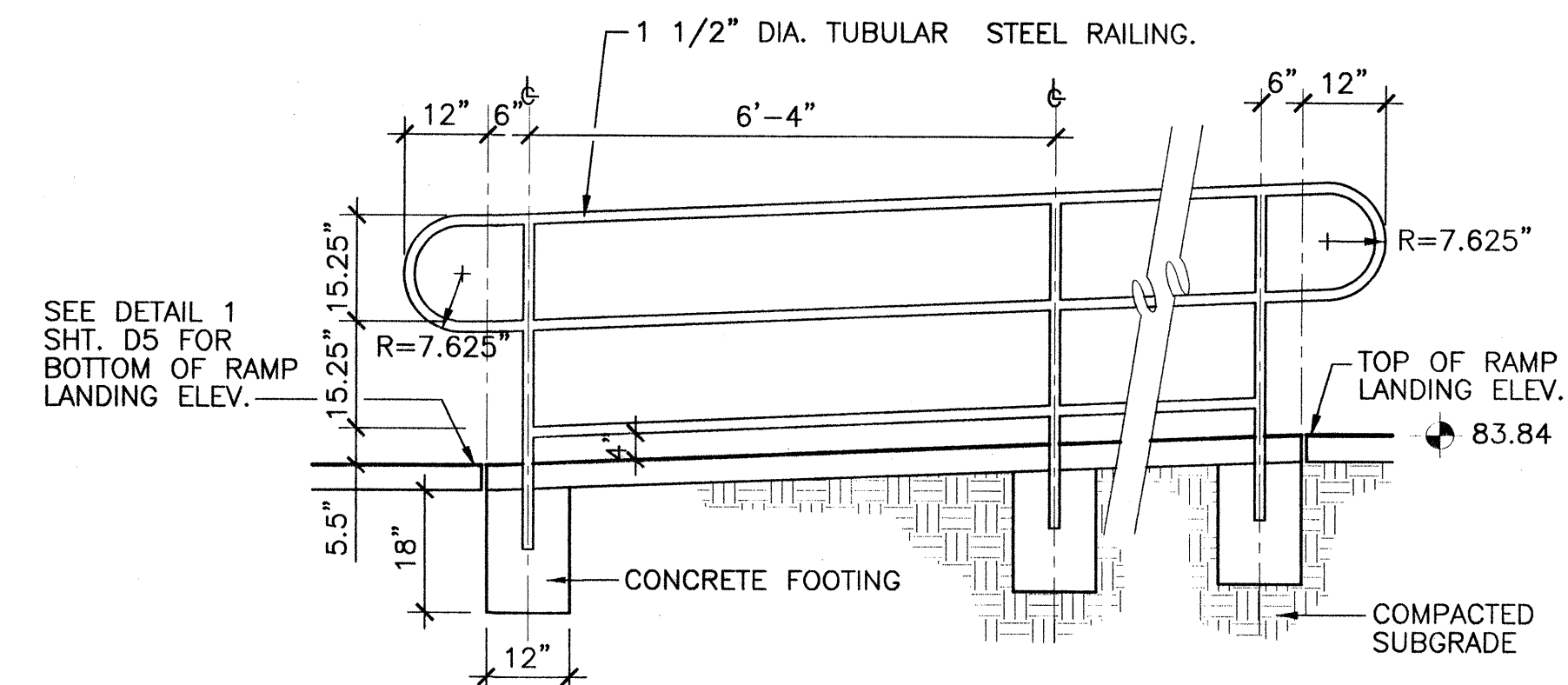
5 COMPASS PAVING DETAIL
D3 1/4"=1'-0"



NOTES:
1. APPLY 10 LBS. OF STABILIZER PER CUBIC YARD OF CRUSHED STONE. INSTALL CRUSHED STONE PER SPECIFICATIONS IN TWO 1 1/2" LIFTS ON TOP OF COMPACTED SUBGRADE.
2. INSTALL PER MANUFACTURE'S SPECIFICATIONS. SUPPLIER: YAVAPI SPORTS SURFACE - (800) 928-2724.

SECTION

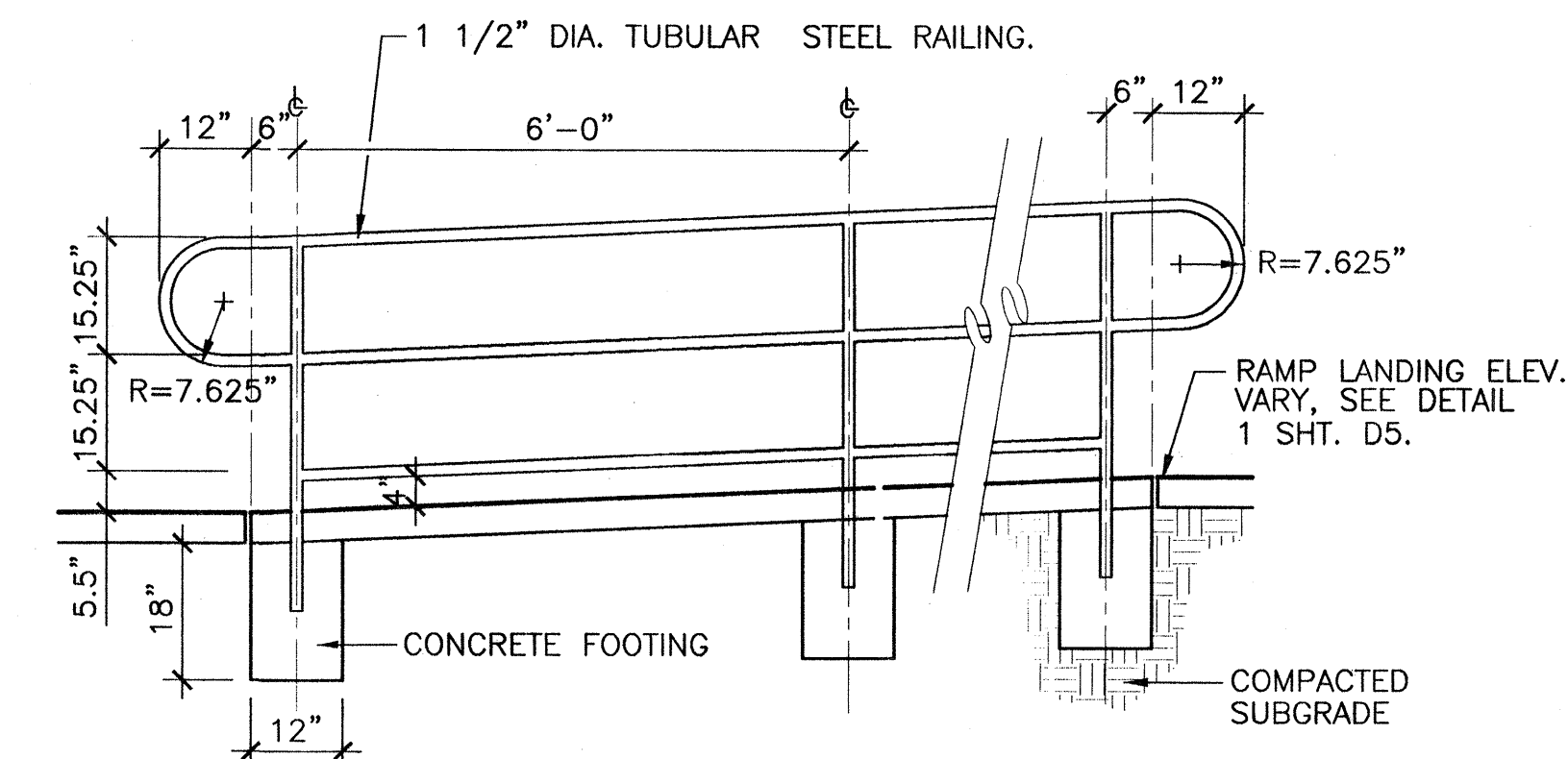
9 STABILIZED CRUSHED STONE PAVEMENT-LIGHT DUTY
D3 1/8"=1'-0"



NOTES:
1. GRIND ALL WELDS SMOOTH.
2. RAILINGS IS CONTINUOUS FOR LENGTH OF RAMP.

SECTION

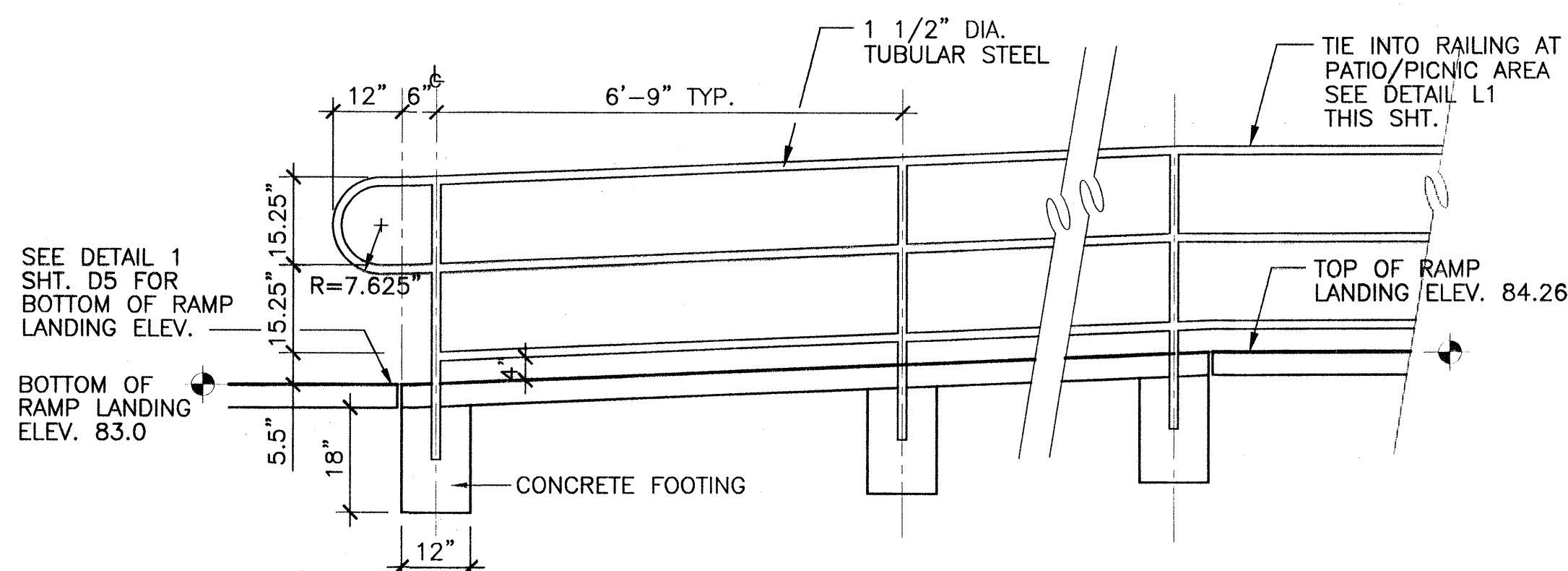
3 OUTSIDE HANDRAIL FOR RAMP AT PLAY AREA
D3 1/2"=1'-0"



NOTES:
1. GRIND ALL WELDS SMOOTH.

SECTION

6 INSIDE HANDRAIL FOR RAMP AT PLAY AREA
D3 1/2"=1'-0"



NOTES:
1. GRIND ALL WELDS SMOOTH.

SECTION

7 HANDRAIL FOR RAMP TO PICNIC AREA
D3 1/2"=1'-0"

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Architects, Inc. AIA

CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

TITLE: PROJECT: KOREAN WAR VETERANS PARK
SHEET: DETAILS

DESIGNWORKSHOP
901 Rio Grande NW
Suite E130
Albuquerque, NM 87104
(Tel.) 505.243.8333
(Fax) 505.243.8337

DESIGNED BY
AUG 13 1999
REVISIONS

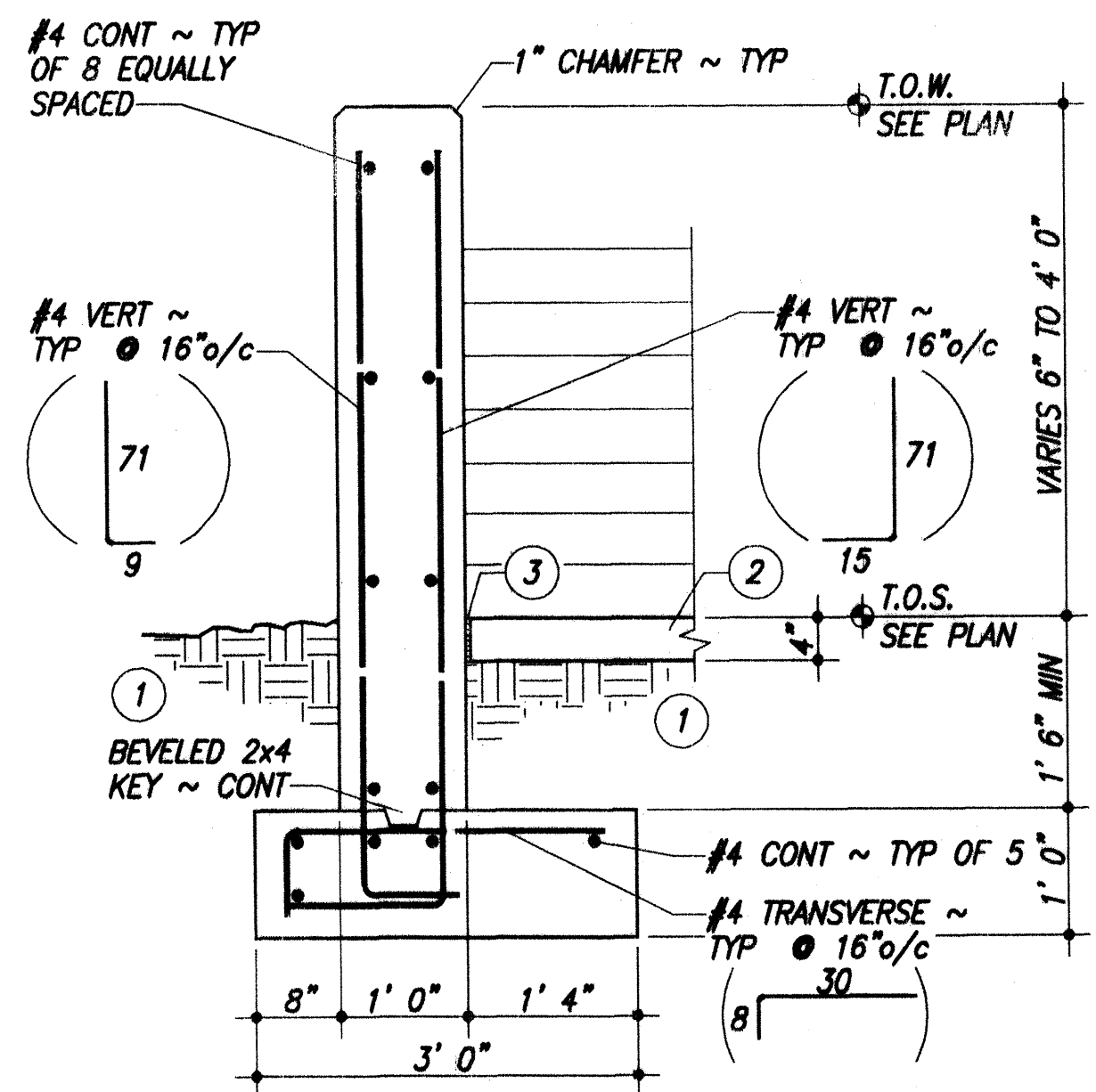
CITY ENGINEER
AUG 13 1999

City Project No. 5020.92

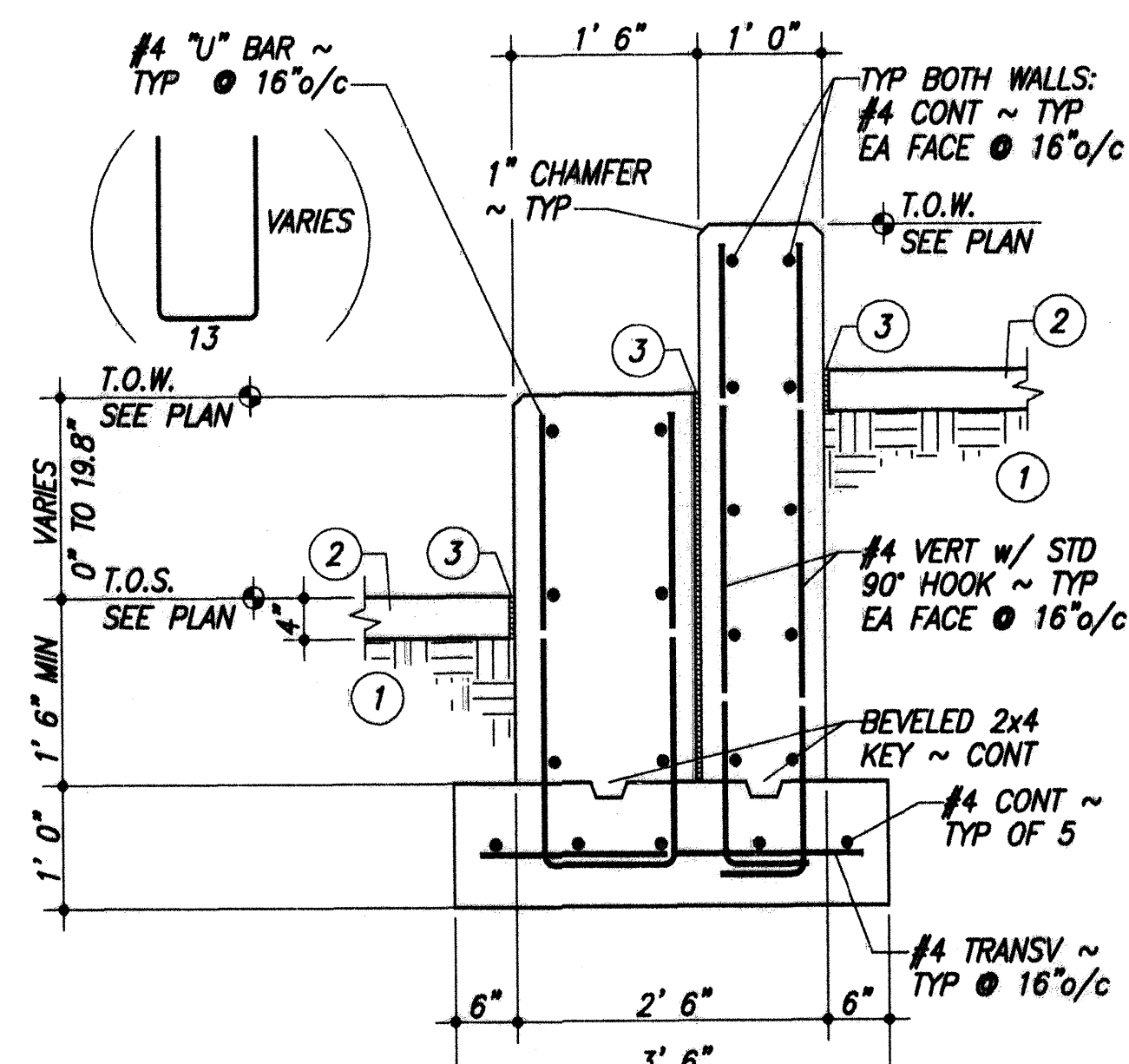
Zone Map No. L-16-Z

Sheet D3 Of 21

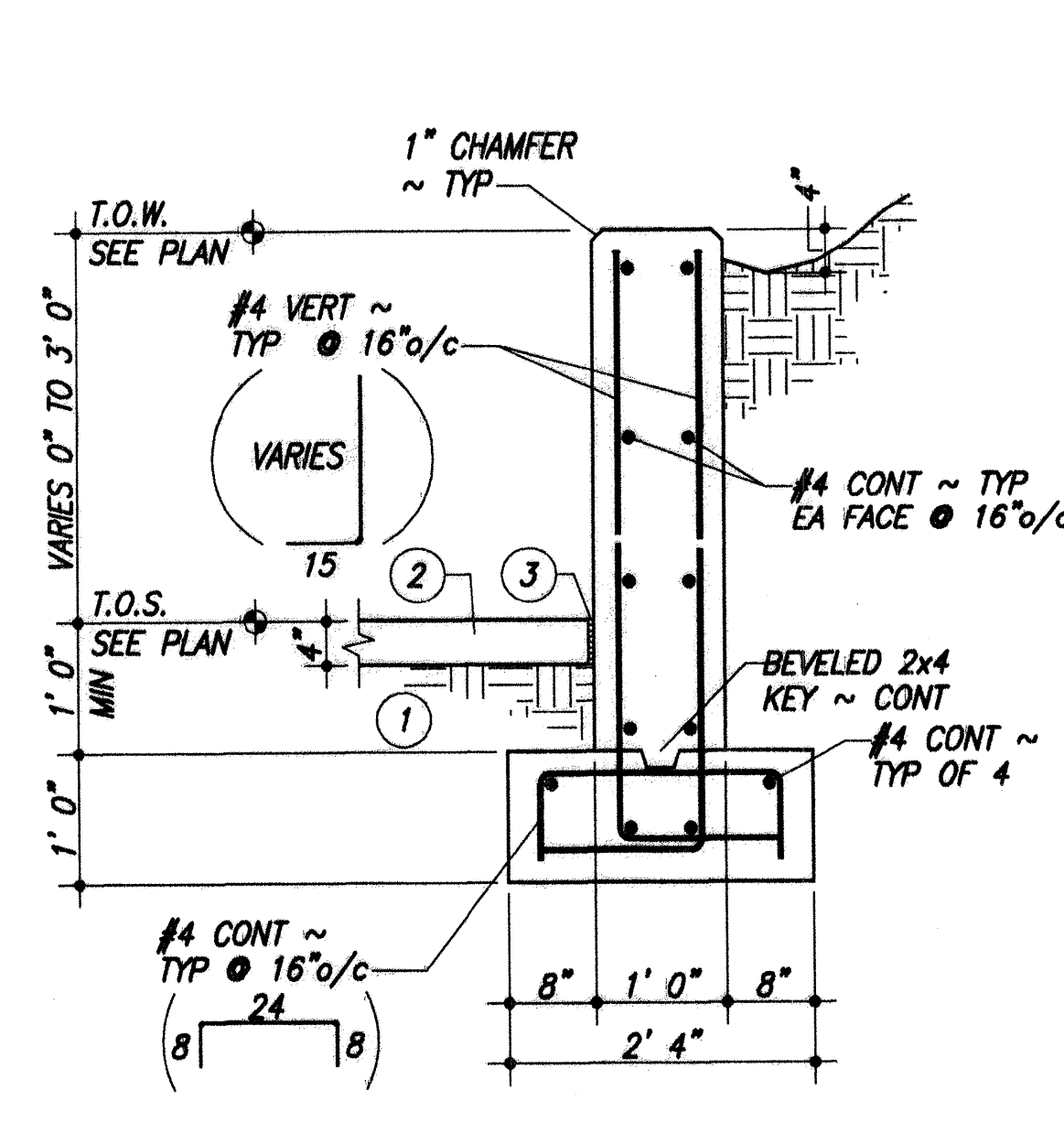
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INSPECTED BY	NO.	DATE	NO.	CONTRACTOR	NO.	DATE	NO.	NO.	BY	DATE	NO.	NO.	BY	DATE	NO.
ACCEPTANCE BY	NO.	DATE	NO.	CONTRACTOR	NO.	DATE	NO.	NO.	BY	DATE	NO.	NO.	BY	DATE	NO.
VERIFICATION BY	NO.	DATE	NO.	CONTRACTOR	NO.	DATE	NO.	NO.	BY	DATE	NO.	NO.	BY	DATE	NO.
COMPLETED BY	NO.	DATE	NO.	CONTRACTOR	NO.	DATE	NO.	NO.	BY	DATE	NO.	NO.	BY	DATE	NO.
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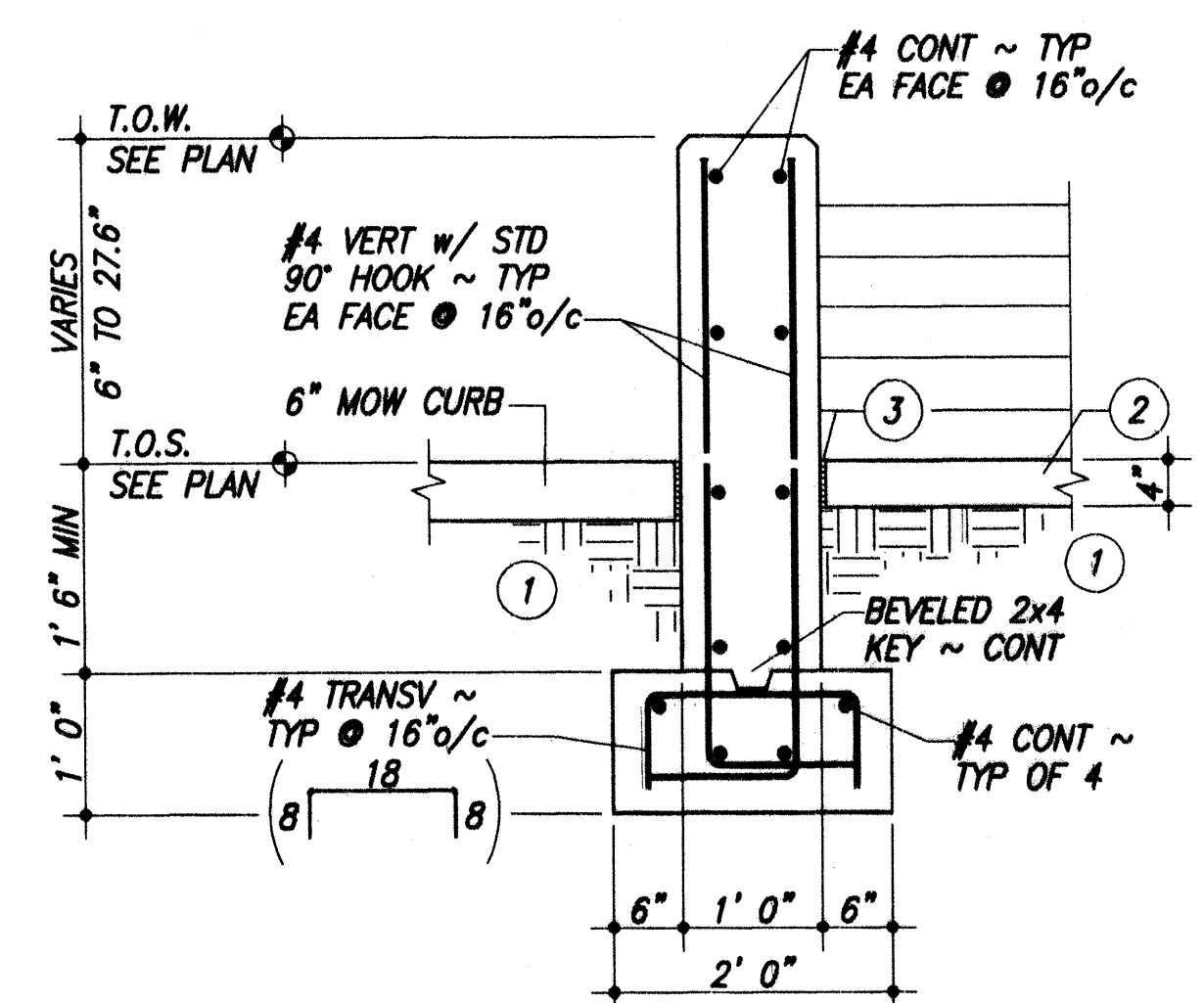
1 CHEEK WALL AT STAIRS AT BASKETBALL COURT
D4 SCALE: 3/4" = 1' 0"



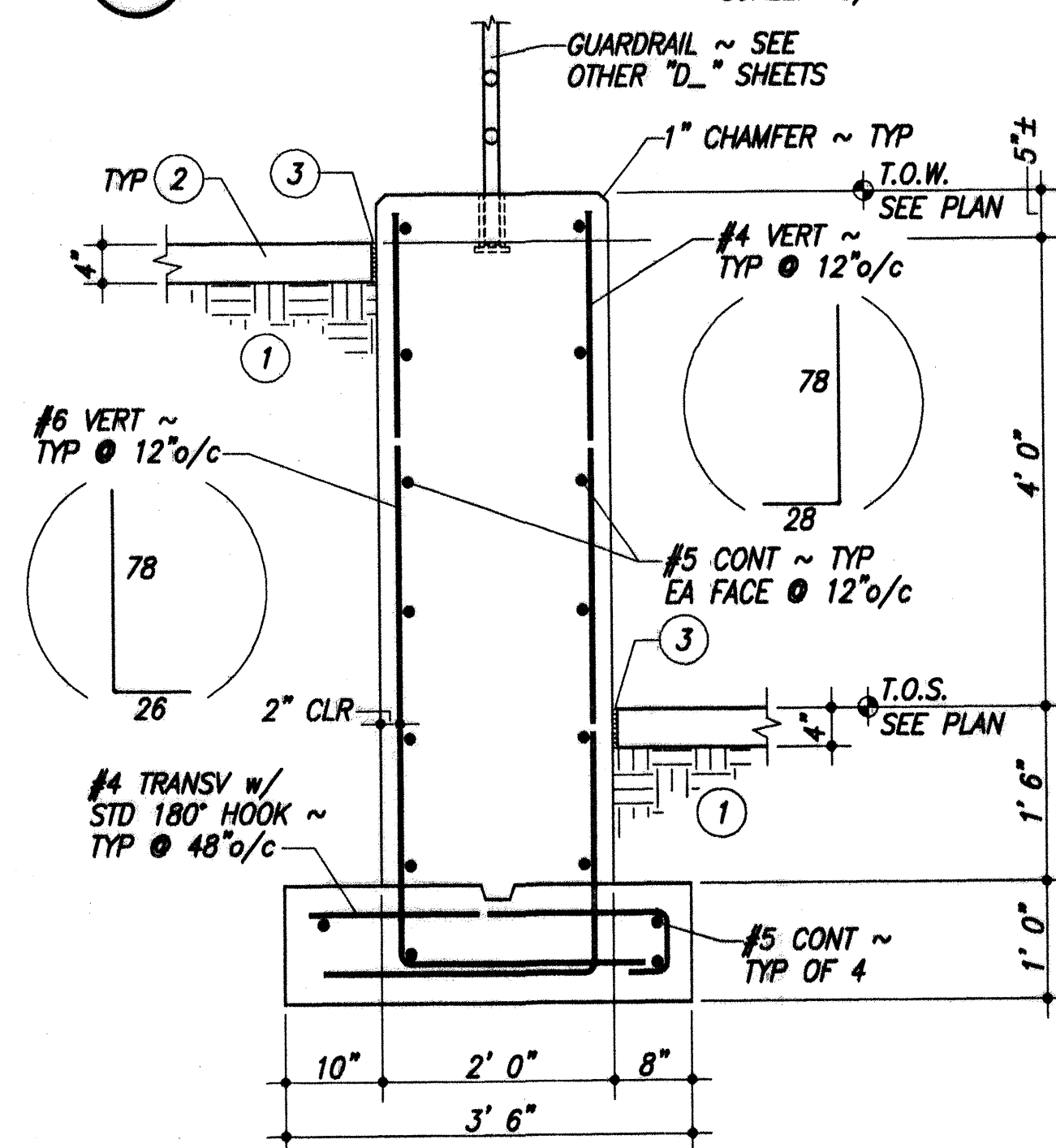
2 STEPPED WALL AT BASKETBALL COURT
D4 SCALE: 3/4" = 1' 0"



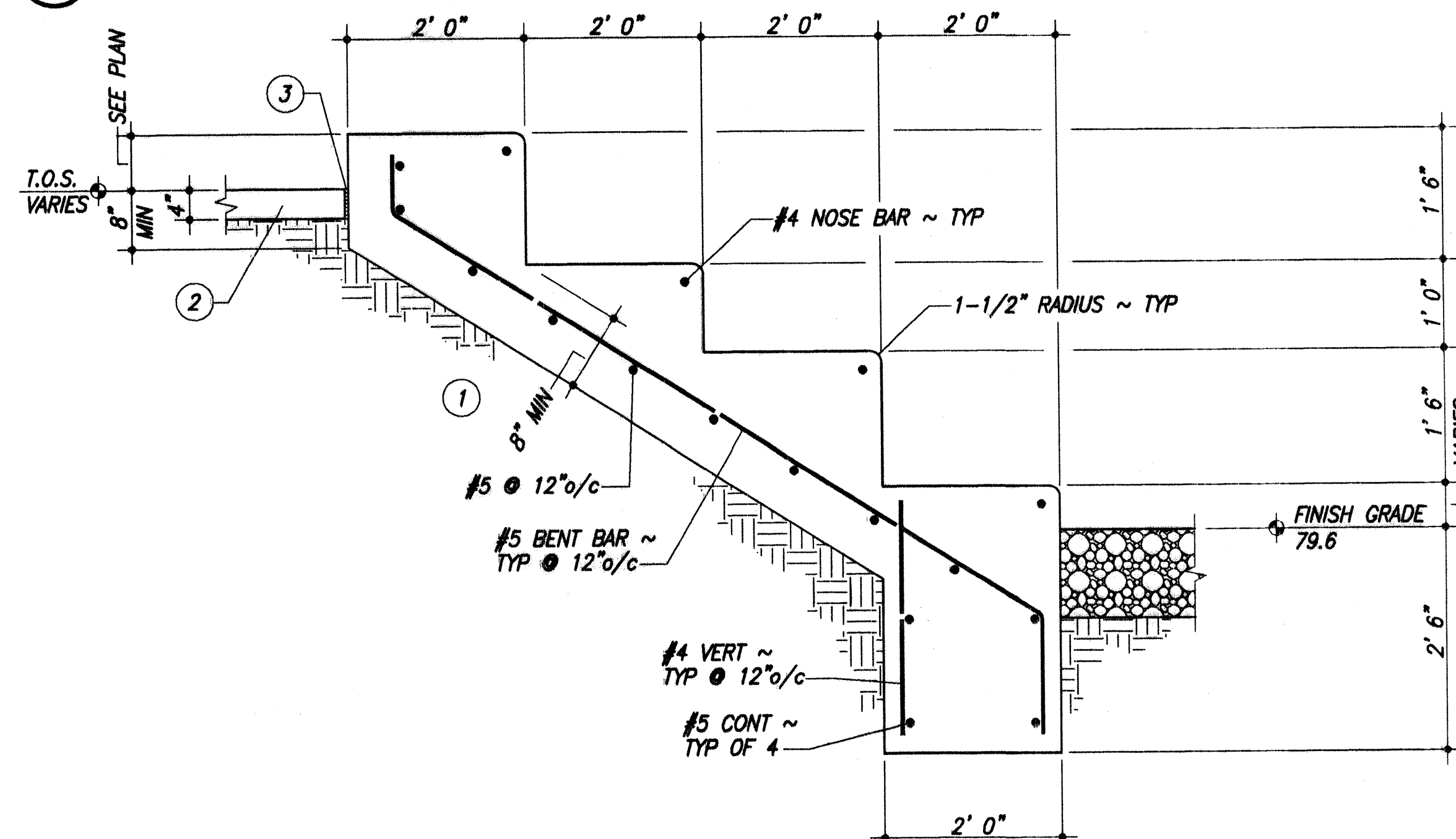
3 RETAINING WALL AT BASKETBALL COURT
D4 SCALE: 3/4" = 1' 0"



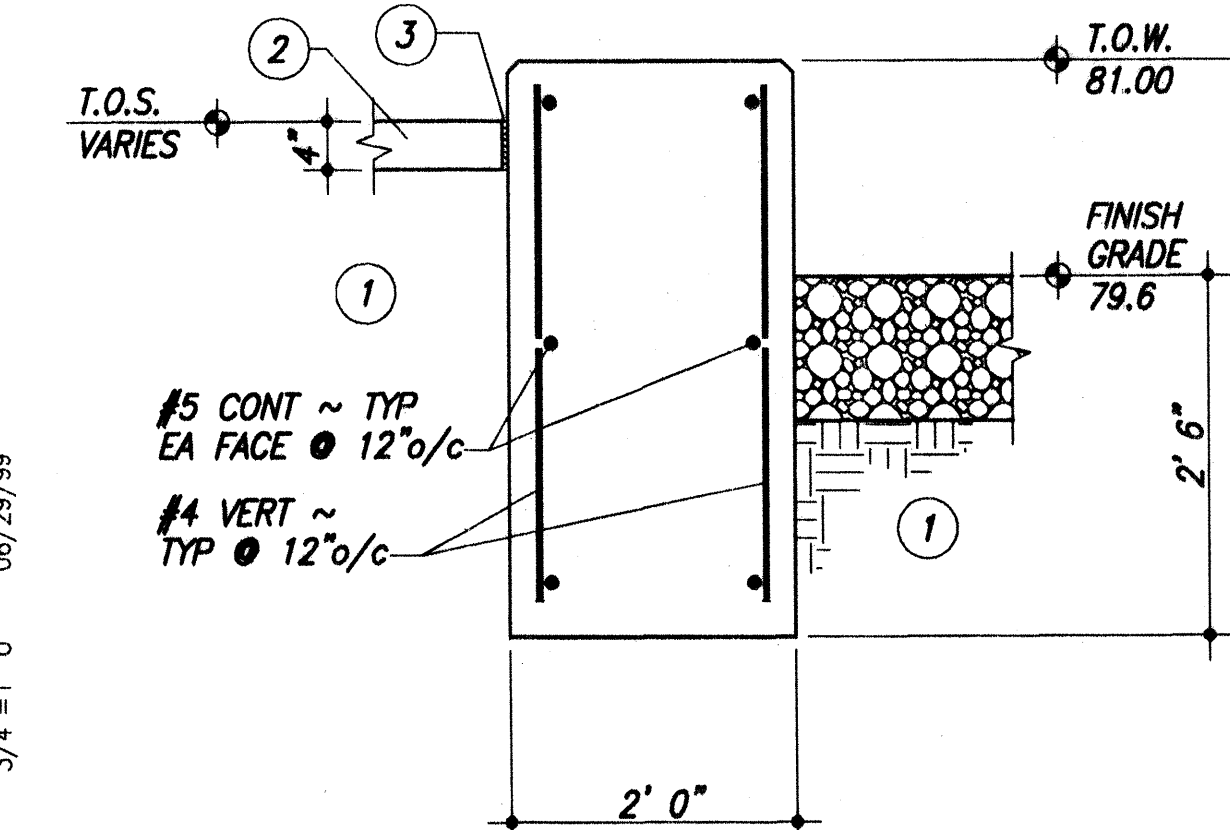
4 CHEEK WALL AT STAIRS AT GRASS AREA
D4 SCALE: 3/4" = 1' 0"



5 RETAINING WALL AT PLAY AREA
D4 SCALE: 3/4" = 1' 0"



6 RETAINING WALL AT PLAY AREA
D4 SCALE: 3/4" = 1' 0"



7 RETAINING WALL AT PLAY AREA
D4 SCALE: 3/4" = 1' 0"

KEYED NOTES - FOUNDATION SECTIONS

- 1 Compacted fill/backfill. See GENERAL NOTES this Sheet for requirements.
- 2 4" thick concrete slab-on-grade. See SPECIFICATIONS.
- 3 1/2" expansion joint material.

GENERAL NOTES - SECTIONS

1. BUILDING CODE
Uniform Building Code, 1997 Edition
2. STRUCTURAL DESIGN CRITERIA
 - a) Soil Bearing Pressure 1500 psf
 - b) Lateral Active Pressure 50 psf/ft
 - c) Lateral Passive Pressure 250 psf/ft
 - d) Coefficient of Friction 0.30
3. STRUCTURAL MATERIALS
 - a) Exposed & Structural Concrete
Minimum Compressive Strength = 4000 psi
Cement: ASTM C150, Type I or II Low Alkali
Aggregates: ASTM C33
4% to 7% Entrained Air
 - See City of Albuquerque Standard Specification Section 101 - Concrete for minimum cement and fly ash requirements and for other information.
 - b) Reinforcing Bars: ASTM A615, deformed
Grade 40 at Stirrups
Grade 60 Typical
4. GENERAL NOTES - EARTHWORK
 - a) GENERAL. Remove and dispose from site all deleterious material including organic matter, man-made fill and existing construction. Do not undercut existing construction that is to remain. Slope sides of excavation as required for slope stability. Provide barricades, warning signs and lights as required to protect existing property, construction personnel and the public.
 - b) SUBGRADE PREPARATION. Excavate to a minimum of 12" below and 12" beyond the edges of all footings, walls and turn-downs. Scarify surface of subgrade to a minimum depth of 8 inches, moisten to within +/- 2 percentage points of optimum moisture content, and compact to at least 95% of maximum density per ASTM D1557.
 - c) FILL AND BACKFILL. Use clean, well-graded on-site soils with a maximum plasticity index of 15. Place fill and backfill in uniform layers of 8" maximum thickness (4" if using hand-held equipment) and compact to at least 95% of maximum density per ASTM D1557. Prior to fill placement moisture condition to optimum moisture content +/- 2 percentage points.
 - d) TESTING SCHEDULE. See SPECIFICATIONS.

GENERAL NOTES - CONCRETE

- a) Fabricate and install reinforcing in accordance with the ACI Detailing Manual and the CRSI Placing Manual. Use standard ACI 90 degree or 180 degree hooks unless otherwise shown. Use Class B tension lap splices with minimum splice length no less than 24 inches.
- b) CONSTRUCTION JOINTS.
 - 1) Footings. Locations to be selected by the Contractor and shall be a minimum of five feet from construction joints in walls.
 - 2) Walls. Locations as shown on Drawings.
 - 3) Horizontal and vertical keyways shall be provided at all construction joints. Continue horizontal reinforcing through construction joints.
- c) CONCRETE COVER. Comply with ACI 318.

Bacchus
Consulting Engineering
STRUCTURAL ENGINEERS
Albuquerque

Kells and Craig

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Architects, Inc. AIA

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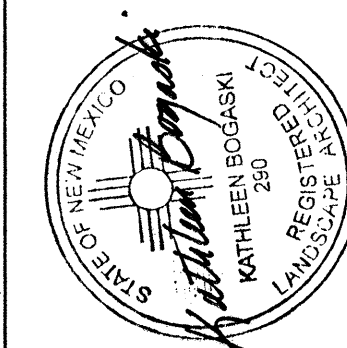
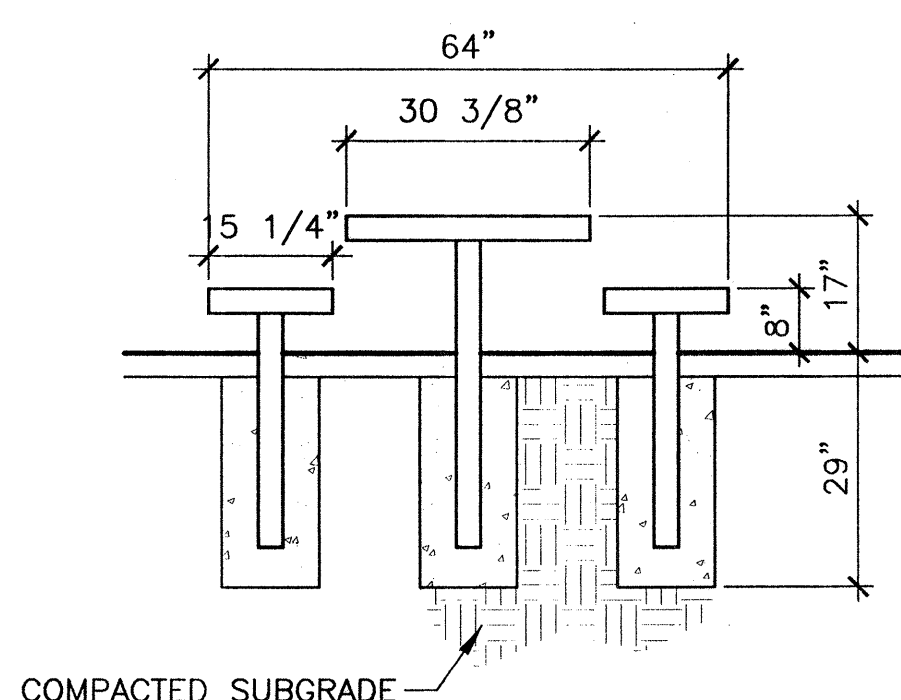
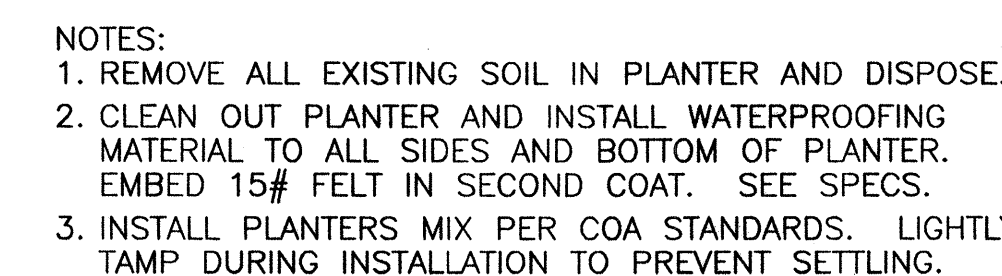
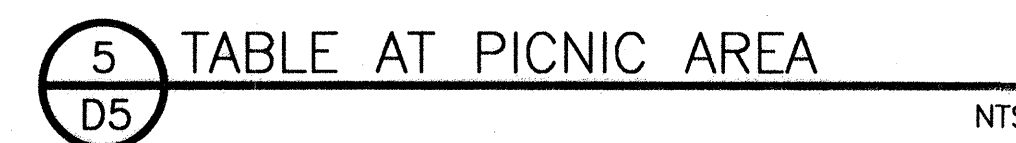
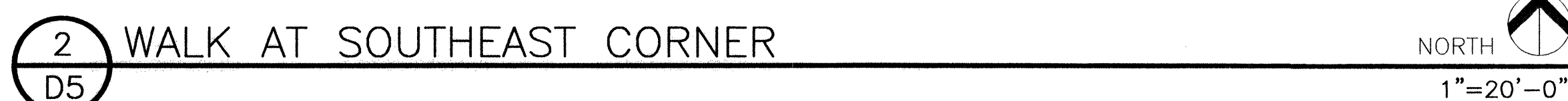
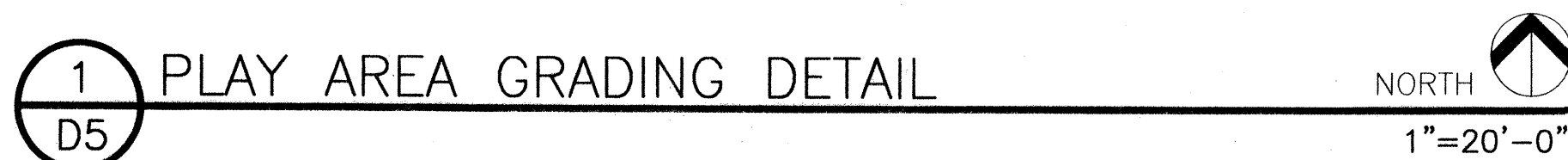
CITY OF ALBUQUERQUE
DEPARTMENT OF FAMILY & COMMUNITY SERVICES

TITLE: KOREAN WAR VETERANS PARK
FOUNDATION SECTIONS

DESIGN	REVIEW	APPROVAL	DATE
DESIGN COMMITTEE	DESIGN COMMITTEE	CITY ENGINEER	AUG 13 1999

City Project No. 5177.94 Zone Map No. L-11-Z Sheet D4 of

BCE99018/D4 3/4" = 1' 0" 06/29/99

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File Name: 910704D.DWG
Plot Date: 05-12-1999
Plot Time: 3:43 pm

DRAINAGE PLAN

INTRODUCTION AND EXECUTIVE SUMMARY:

THIS GRADING AND DRAINAGE PLAN SUPPORTS THE PROPOSED CONSTRUCTION OF LANDSCAPING AND PAVING IMPROVEMENTS AT AN EXISTING CITY OF ALBUQUERQUE PARK SITE. THE PROPOSED CONSTRUCTION CONSISTS OF NEW PAVED PARKING, CONCRETE AND GRAVEL WALKWAYS, SAND AND HARD-SURFACED RECREATIONAL AREAS, A LARGE SOD PLAY FIELD, AND MISCELLANEOUS LANDSCAPING IMPROVEMENTS. THE SITE IS CURRENTLY PARTIALLY DEVELOPED AND CONTAINS AN EXISTING COMMUNITY CENTER BUILDING, A PAVED PARKING LOT, BASKETBALL COURTS, A SOD FIELD, AND MISCELLANEOUS RECREATIONAL AREAS WITH INTERCONNECTING WALKWAYS. THE SURROUNDING AREA IS FULLY DEVELOPED COMMERCIAL AND RESIDENTIAL, MAKING THIS A MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA. THE PROPOSED IMPROVEMENTS WILL CREATE AN INCREASE IN IMPERVIOUS AREA AND RUNOFF GENERATED BY THE SITE WHICH WILL BE MITIGATED BY ON-SITE DETENTION PONDING AS DEMONSTRATED IN THE DRAINAGE CALCULATIONS CONTAINED HEREON. THIS PLAN PROPOSES THE CONTINUED DISCHARGE OF RUNOFF FROM THIS PROPERTY AT EXISTING DISCHARGE POINTS WITHIN PUBLIC RIGHT-OF-WAY TO EXISTING PUBLIC STORM DRAIN IMPROVEMENTS. THE PURPOSE OF THIS SUBMITTAL IS TO OBTAIN GRADING PERMIT AND WORK ORDER APPROVALS.

REFERENCES:

THE FOLLOWING IS A LIST OF PREVIOUSLY APPROVED GRADING AND DRAINAGE PLANS AND REPORTS RELATIVE TO THIS SITE AND/OR REFERENCED WITHIN THIS DRAINAGE PLAN. THIS LIST MAY NOT BE INCLUSIVE, HOWEVER, REPRESENTS A SUMMARY OF THOSE PLANS WHICH ARE KNOWN TO THIS PREPARER.

1. GRADING AND DRAINAGE PLAN FOR THE LOMA LINDA COMMUNITY CENTER PREPARED BY JEFF MORTENSEN AND ASSOCIATES (JMA), DATED 12/26/95 (L-16/025). THIS PLAN WAS PREPARED FOR THE EXISTING SOD FIELD AND TRAIL IMPROVEMENTS ON THE SITE. THIS PLAN SETS A PRECEDENT FOR THE SITE BY WHICH FREE DISCHARGE OF LANDSCAPING IMPROVEMENTS IS ALLOWED. THIS PLAN INCORPORATED WATER HARVESTING FEATURES TO MINIMIZE THE DOWNSTREAM IMPACT OF THE RUNOFF AND SEDIMENT GENERATED BY THE LANDSCAPED AREAS. THE DRAINAGE BASIN NAMES AND BOUNDARIES IDENTIFIED ON THIS PREVIOUS PLAN HAVE BEEN PRESENTED HEREON FOR CONSISTENCY.
2. STADIUM BOULEVARD STORM DRAINAGE IMPROVEMENT ENGINEERING ANALYSIS REPORT PREPARED FOR THE CITY OF ALBUQUERQUE BY BOHANNAN-HUSTON, INC. (BHI), DATED OCTOBER, 1994. THIS REPORT ANALYZES DRAINAGE CONDITIONS WITHIN THE UNIVERSITY OF NEW MEXICO (UNM) PORTION OF THE SUBJECT DRAINAGE BASIN AND THE BENEFICIAL IMPACTS THAT THE STADIUM STORM DRAIN (SINCE CONSTRUCTED BY THE CITY OF ALBUQUERQUE) HAS UPON THE DOWNSTREAM CONDITIONS.
3. A REPORT ON UNM SOUTH CAMPUS DRAINAGE CONDITIONS, OCTOBER 1991, PREPARED BY ANDREWS, ASBURY AND ROBERT (AAR) FOR THE UNIVERSITY OF NEW MEXICO. THIS REPORT ANALYZES DRAINAGE CONDITIONS WITHIN THE SUBJECT DRAINAGE BASIN AND THE IMPACT UPON UNM.
4. UNIVERSITY OF NEW MEXICO TENNIS BUBBLE STORM DRAINAGE ENGINEERING ANALYSIS REPORT, 06/08/95, PREPARED BY JMA FOR THE UNIVERSITY OF NEW MEXICO. THIS REPORT ALSO ANALYZES DRAINAGE CONDITIONS WITHIN THE SUBJECT DRAINAGE BASIN.

PROJECT DESCRIPTION:

AS SHOWN BY THE VICINITY MAP HEREON, THE SITE IS LOCATED ON YALE BLVD. SE APPROXIMATELY 250 FEET SOUTH OF THE INTERSECTION WITH KATHRYN AVE. SE. A SMALL PORTION AT THE NORTHEAST CORNER OF THE SITE ADJOINS KATHRYN AVE. SE. AS PREVIOUSLY MENTIONED, THE SITE IS PARTIALLY DEVELOPED. THE LEGAL DESCRIPTION OF THE SUBJECT PROPERTY IS TRACT 2-A-1 CACTUS/SHALIT PARCEL. THE SITE IS ZONED SU-1 FOR COMMUNITY CENTER AND PARK, AND LIES WITHIN AN INFILL AREA.

AS SHOWN BY PANEL 353 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS FOR BERNALILLO COUNTY, NEW MEXICO, AND INCORPORATED AREAS DATED SEPTEMBER 20, 1996, THIS SITE DOES NOT LIE WITHIN, OR DIRECTLY UPSTREAM OF, A DESIGNATED FLOOD HAZARD ZONE.

EXISTING CONDITIONS:

AS SHOWN BY THE GRADING PLAN ON SHEET G1, THE SITE IS PARTIALLY DEVELOPED AS A PUBLIC COMMUNITY CENTER AND CITY PARK. THE SITE IS DIVIDED INTO TWO DRAINAGE BASINS. THESE EXISTING BASINS ARE CONSISTENT WITH THOSE SHOWN ON THE PREVIOUSLY REFERENCED JMA PLAN FOR THE LOMA LINDA COMMUNITY CENTER. MUCH OF THE SITE IS CURRENTLY "UNDEVELOPED" AND COVERED WITH NATIVE VEGETATION. THE SITE PREVIOUSLY CONTAINED A DRIVE-IN MOVIE THEATER. MOST OF THE ASPHALT PAVEMENT HAS BEEN REMOVED, AND THE SITE HAS BEEN REVEGETATED. THE EXISTING LAND TREATMENT IS ASSUMED TO BE TYPE B BECAUSE THE SITE HAS BEEN PREVIOUSLY GRADED AND REVEGETATED.

OFFSITE FLOWS DO NOT ENTER THE SITE FROM TRACTS B1 AND B2, CACTUS/SHALIT PARCEL TO THE NORTH WHICH LIE TOPOGRAPHICALLY LOWER, OR FROM YALE BLVD. SE THAT ALSO LIES TOPOGRAPHICALLY LOWER. MINOR OFFSITE FLOWS APPEAR TO ENTER SUB-BASIN A-2 FROM THE UNPAVED ALLEY TO THE EAST. THESE FLOWS ARE ACCEPTED AND PASSED THROUGH THE SITE. OFFSITE FLOWS ALSO ENTER THE SITE FROM TRACT A-2 TO THE SOUTH WHERE THE EXISTING PIONEER FACTORY OUTLET BUILDING DISCHARGES ROOF DRAINAGE ONTO THE SITE. THESE OFFSITE FLOWS DRAIN TO THE WEST ALONG THE COMMON PROPERTY LINE UNTIL THEY RETURN TO TRACT A-2 AT AN EXISTING PARKING LOT.

BASIN A IS DIVIDED INTO THREE SUB-BASINS, ALL OF WHICH DRAIN ACROSS THE SITE IN A SHEETFLOW MANNER TO A POINT OF CONCENTRATION LOCATED ON TRACT B1, APPROXIMATELY 70 FEET NORTH OF THE NORTHWEST CORNER OF THE SITE. SUB-BASIN A-1 DRAINS DIRECTLY TO THIS POINT OF CONCENTRATION. THIS POINT OF CONCENTRATION IS LOCATED WITHIN AN EXISTING "DRAINAGE SILT RETENTION EASEMENT" WHICH SERVES TRACTS B1, B2, 2A, AND TRACT 1. SUB-BASIN A-2 IS THE NORTHEAST PORTION OF THE SITE THAT SHEET DRAINS TO THE WEST, ACROSS TRACTS B1 AND B2, AND THENCE TO THE AFOREMENTIONED POINT OF CONCENTRATION. SUB-BASIN A-3 CONTAINS A LARGE IRRIGATED SOD AREA THAT WAS ADDRESSED BY THE PREVIOUSLY REFERENCED JMA PLAN FOR THE LOMA LINDA COMMUNITY CENTER. AS IDENTIFIED IN THAT PLAN, SUB-BASIN A-3 CONTAINS A LANDSCAPING/WATER HARVESTING FEATURE THAT REDUCES THE VOLUME AND PEAK RATE OF RUNOFF GENERATED BY THAT SUB-BASIN. SUB-BASIN A-3 THEN SHEET DRAINS TO SUB-BASIN A-1 AND THENCE TO THE POINT OF CONCENTRATION. FROM THIS POINT, RUNOFF ENTERS A 42-INCH PUBLIC STORM DRAIN IN YALE THROUGH VIA AN EXISTING DOUBLE D STORM INLET. THE PUBLIC STORM DRAIN IN YALE BLVD CONNECTS TO AN EXISTING 30-INCH RCP STORM DRAIN THAT FLOWS TO THE WEST WITHIN KATHRYN AVE.

BASIN B IS THE SOUTHERN PORTION OF THE SITE THAT DRAINS FROM EAST TO WEST AND DISCHARGES DIRECTLY TO YALE BY SURFACE DRAINAGE AND THROUGH AN EXISTING PRIVATE ENTRANCE, YALE BOULEVARD SE IS A FULLY DEVELOPED PUBLIC STREET. RUNOFF WITHIN YALE DRAINS TO THE NORTH TO EXISTING PUBLIC STORM INLETS LOCATED NEAR THE INTERSECTION WITH KATHRYN AVE. THESE INLETS ARE CONNECTED TO THE AFOREMENTIONED KATHRYN (PUBLIC) STORM DRAIN.

THE KATHRYN STORM DRAIN SYSTEM HAS BEEN THE SUBJECT OF SEVERAL ANALYSES. THIS PUBLIC STORM DRAIN BEGINS AT GIRARD BLVD. SE AND CONTINUES WESTWARD WITHIN KATHRYN AVE. SE TO BUENA VISTA DRIVE SE. FROM BUENA VISTA, THE KATHRYN STORM DRAIN CONTINUES TO THE WEST ACROSS UNM PROPERTY TO THE EXISTING 54-INCH UNIVERSITY BLVD SE STORM DRAIN. THE UNIVERSITY BLVD STORM DRAIN ULTIMATELY OUTLETS TO THE SOUTH DIVERSION CHANNEL. ALTHOUGH THE FIRM PANELS DO NOT IDENTIFY DOWNSTREAM FLOODING, THE PREVIOUSLY REFERENCED UNM AND STADIUM DRAINAGE REPORTS BY AAR, BHI AND JMA ALL IDENTIFY DRAINAGE CAPACITY DEFICIENCIES BEGINNING AT THE INTERSECTION OF KATHRYN AND BUENA VISTA. IT IS AT THIS POINT THAT THE STREET AND STORM DRAIN FLOWS IN BUENA VISTA COMBINE WITH THE STREET AND STORM DRAIN FLOWS IN KATHRYN. AT THIS POINT THE KATHRYN STORM DRAIN IS FULL WITH 85 CFS AND A RESIDUAL OVERLAND FLOW OF 290 CFS AS IDENTIFIED BY THE BHI REPORT. THE JMA REPORT DETERMINED THE RESIDUAL FLOW TO BE 211 CFS AT THIS LOCATION. FOR COMPARISON, THE ALBUQUERQUE MASTER DRAINAGE STUDY, VOLUME II (AMDS) IDENTIFIED THE RESIDUAL OVERLAND FLOW TO BE 47 CFS AT THIS LOCATION (AP 4101). IT IS AT THIS POINT THAT THE STORM DRAIN AND RESIDUAL OVERLAND FLOWS ENTER UNM PROPERTY.

THE PREVIOUSLY REFERENCED BHI, AAR AND JMA STUDIES ALL INDICATE THAT THE EXISTING STORM DRAIN AND ON-SITE UNM FACILITIES DO NOT HAVE SUFFICIENT CAPACITY TO COLLECT AND CONVEY THE 100-YEAR FULLY DEVELOPED OFFSITE FLOWS ACROSS UNM PROPERTY. ADDITIONALLY, UNM CONTRIBUTES SIGNIFICANT ON-SITE FLOWS TO THIS ALREADY OVERBURDENED SYSTEM. THE 1991 AAR REPORT CONCLUDED THAT THE KATHRYN SYSTEM "COULD HANDLE OFF-SITE FLOWS FROM APPROXIMATELY A 10-YEAR FREQUENCY EVENT" AND THAT THE EXISTING UNM ON-SITE SYSTEM "HAS THE CAPACITY TO CARRY ON-SITE FLOWS FROM APPROXIMATELY A 2 YEAR FREQUENCY EVENT".

THIS DRAINAGE SITUATION HAS SINCE BEEN IMPROVED BY THE CITY OF ALBUQUERQUE CONSTRUCTION OF THE STADIUM STORM DRAIN IMPROVEMENTS. AS IDENTIFIED IN THE BHI REPORT, THE STADIUM PROJECT CONSTRUCTED UPSTREAM DIVERSIONS WHICH INTERCEPT FLOWS DRAINING TO KATHRYN VIA WILMOORE AND BUENA VISTA DRIVES. THE BHI REPORT STATES THAT "A FLOW REDUCTION OF UP TO 150 CFS FOR THE 100-YEAR STORM EVENT CAN BE EXPECTED." THE STADIUM PROJECT ALSO DIVERTS AND ACCEPTS STREET FLOWS AT THE INTERSECTION OF UNIVERSITY AND STADIUM FROM, THEREBY RELIEVING THE UNIVERSITY BLVD STORM DRAIN WHICH IS THE OUTFALL FOR THE KATHRYN SYSTEM. THESE STADIUM BLVD STORM DRAIN IMPROVEMENTS CONSTRUCTED BY THE CITY OF ALBUQUERQUE HAVE SIGNIFICANTLY IMPROVED THE DOWNSTREAM CONDITIONS.

DEVELOPED CONDITION:

AS PREVIOUSLY INDICATED, THE PROPOSED IMPROVEMENTS CONSIST OF THE CONSTRUCTION OF A PARKING LOT EXPANSION, A NEW SOD PLAY FIELD, AND ASSOCIATED RECREATIONAL PAVING AND LANDSCAPING IMPROVEMENTS. AS SHOWN BY THE GRADING PLAN THE SITE WILL CONTINUE TO DRAIN TO PUBLIC STORM DRAIN AND RIGHT-OF-WAY CONSISTENT WITH EXISTING DRAINAGE PATTERNS. IN RECOGNITION OF LIMITED DOWNSTREAM CAPACITY, THE PROPOSED PLAN WILL UTILIZE DETENTION PONDING AND WATER HARVESTING FEATURES TO MITIGATE THE INCREASE IN RUNOFF. AS DEMONSTRATED HEREIN, THE PROPOSED DRAINAGE IMPROVEMENTS WILL REDUCE THE IMPACT OF THIS SITE UPON THE WATERSHED, AND WILL IMPROVE THE DOWNSTREAM DRAINAGE CONDITIONS.

BASIN B WILL CONTINUE TO DISCHARGE FREELY TO YALE BLVD. SE STREET VIA THE EXISTING PRIVATE ENTRANCE. YALE BLVD DRAINS FROM SOUTH TO NORTH TO EXISTING STORM INLETS LOCATED AT THE KATHRYN AVE INTERSECTION. A LARGE PORTION OF THE EXISTING BASIN B WILL BE DIVERTED TO BASIN A BY A PROPOSED ON-SITE PVC OR HOPE STORM DRAIN. ALL ON-SITE STORM DRAINS WILL BE MAINTAINED BY THE CITY OF ALBUQUERQUE CAPITAL IMPLEMENTATION PROGRAM (CIP) PURSUANT TO A TELEPHONE CONVERSATION WITH MR. TOM ELLIS ON 01/15/1999. AS SHOWN BY THE CALCULATIONS, THIS DIVERSION WILL REDUCE THE PEAK RATE OF DISCHARGE DRAINING DIRECTLY TO YALE BY OVER 63% (11.2 CFS VS. 4.1 CFS). TO FURTHER REDUCE THE VOLUME AND RATE OF RUNOFF FROM BASIN B, A LANDSCAPING COBBLE SWALE/INFILTRATION FEATURE IS PROPOSED WITHIN SUB-BASIN B-1. RUNOFF WITHIN THIS SUB-BASIN WILL BE ROUTED THROUGH THIS FEATURE WHICH IS INTENDED TO INTRODUCE RUNOFF DIRECTLY INTO THE GROUND BY MAXIMIZING THE POTENTIAL FOR INFILTRATION. ALTHOUGH THIS FEATURE WILL FURTHER MINIMIZE THE PEAK RATE AND VOLUME OF RUNOFF FROM THIS SUB-BASIN, THE DRAINAGE CALCULATIONS DO NOT TAKE CREDIT FOR THIS POTENTIAL REDUCTION. THE USE OF SUCH WATER HARVESTING FEATURES IS CONSISTENT WITH PRIOR DEVELOPMENT ON THIS SITE, AND IS AN EXAMPLE OF THE MEASURES PROPOSED HEREIN TO MINIMIZE THE IMPACT OF THIS SITE, TO IMPROVE DOWNSTREAM DRAINAGE CONDITIONS, AND TO IMPLEMENT WATER CONSERVATION TECHNIQUES.

A NEW DETENTION POND WILL BE CONSTRUCTED WITHIN THE SOD PLAY FIELD IN SUB-BASIN A-1. RUNOFF FROM SUB-BASINS A-3 AND A-4 ENTERS SUB-BASIN A-1 AND WILL BE ROUTED THROUGH THIS DETENTION POND. THIS POND WILL OUTLET TO A 30 INCH RCP STORM DRAIN THROUGH A DOUBLE D STORM INLET LOCATED AT THE NORTHWEST CORNER OF THE PLAY FIELD. IN RECOGNITION OF LIMITED DOWNSTREAM CAPACITY, AN 18-INCH DIAMETER ORIFICE PLATE WILL LIMIT THE RCP OUTLET. THIS 30 INCH STORM DRAIN WILL BE DIRECTLY CONNECTED TO THE EXISTING SITE OUTFALL, AN EXISTING PUBLIC DOUBLE D STORM INLET LOCATED WITHIN THE DRAINAGE SILT RETENTION EASEMENT LOCATED ON TRACT B2, CACTUS/SHALIT PARCEL. THIS DIRECT STORM DRAIN CONNECTION WILL ELIMINATE THE EXISTING CONDITION WHEREBY SURFACE RUNOFF FROM THIS SITE DISCHARGES FREELY ONTO THE EASEMENT ON THE ADJACENT PROPERTY. AS SHOWN BY THE CALCULATIONS ON SHEET G3, THE PROPOSED DETENTION SYSTEM WILL REDUCE THE SITE DISCHARGE TO PUBLIC STORM DRAIN TO A RATE LESS THAN EXISTING. THE USE OF DETENTION PONDING WILL ALSO DELAY, REDUCE, AND ATTENUATE THE PEAK RATE OF RUNOFF FROM THIS SITE, THEREFORE REDUCING THE OBSERVED RATE OF RUNOFF AND DOWNSTREAM IMPACT ATTRIBUTABLE TO THIS SITE. SHOULD THE DOWNSTREAM CONDITIONS BE IMPROVED IN THE FUTURE TO ALLOW FREE DISCHARGE FROM THIS SITE, THE ORIFICE PLATE CAN BE REMOVED.

SUB-BASIN A-2 IS THE AFOREMENTIONED NORTHEAST CORNER OF THE SITE WHICH IS UNDEVELOPED EXCEPT FOR AN EXISTING GRAVEL WALKWAY WHICH LINKS THE SITE TO KATHRYN AVE. AS PART OF THIS PROJECT THIS GRAVEL WALKWAY WILL BE REPLACED WITH A CONCRETE SIDEWALK. NO OTHER IMPROVEMENTS ARE PROPOSED WITHIN SUB-BASIN A-2. AS SHOWN BY THE CALCULATIONS, THIS CHANGE WILL CAUSE A NEGLIGIBLE INCREASE IN THE VOLUME OF RUNOFF GENERATED BY THIS SUB-BASIN. NO GRADING IS PROPOSED WITHIN THIS AREA.

ALTHOUGH THERE ARE NO IMPROVEMENTS PROPOSED WITHIN SUB-BASIN A-3 AT THIS TIME, THE DEVELOPED DRAINAGE CONDITIONS CALCULATIONS INCLUDE A 22,000 SF INCREASE OF LAND TREATMENT D TO ALLOW FUTURE BUILDING CONSTRUCTION EAST OF THE EXISTING BUILDING. THIS FUTURE CONSTRUCTION WILL REQUIRE A SEPARATE OR UPDATED GRADING AND DRAINAGE PLAN. SUB-BASIN A-3 WILL CONTINUE TO DRAIN TO SUB-BASIN A-1 CONSISTENT WITH THE EXISTING CONDITIONS.

SUB-BASIN A-4 PREDOMINANTLY CONSISTS OF THE EXPANDED PARKING LOT. THIS BASIN WILL DRAIN ACROSS THE PARKING LOT TO THE WESTMOST CORNER WHERE IT WILL ENTER A NEW 18-INCH PVC OR HOPE STORM DRAIN THROUGH A NEW DOUBLE D STORM INLET. THIS STORM DRAIN IS SIZED FOR THE 100-YEAR FLOW RATE, AND WILL DRAIN TO THE NORTH UNDER THE EXISTING SITE ENTRANCE ROAD TO A SINGLE D INLET. FROM THIS POINT, THE STORM DRAIN WILL BE REDUCED TO 12 INCHES AND CONTINUE UNDER THE PLAY FIELD AND CONNECT TO THE RETENTION POND INLET WHERE THE FLOWS WILL COMBINE WITH RUNOFF FROM SUB-BASINS A-1 AND A-3. THIS REDUCTION IN PIPE SIZE INTENTIONALLY RESULTS IN A STORM DRAIN WITH A CAPACITY THAT IS APPROXIMATELY 5 CFS LESS THAN THE 100-YEAR FLOW RATE. IN THE EVENT OF A SIGNIFICANT RAINFALL EVENT THAT EXCEEDS THIS STORM DRAIN CAPACITY, THE EXCESS FLOWS WILL SURGE OUT THROUGH THE SINGLE D INLET ONTO THE NEW PLAY FIELD AND COMBINE WITH THE RUNOFF FROM SUB-BASIN A-1. THIS WILL GIVE THE EXCESS RUNOFF ADDITIONAL OPPORTUNITY TO INFILTRATE. AS PREVIOUSLY MENTIONED, ALL ON-SITE STORM DRAINS WILL BE PRIVATE AND OWNED, OPERATED AND MAINTAINED BY C.I.P. THE LAND TREATMENT ASSUMPTIONS FOR THIS BASIN INCLUDE AN ADDITIONAL 19,000 SF OF LAND TREATMENT D IN ANTICIPATION OF A FUTURE PARKING LOT EXPANSION IN ASSOCIATION WITH FUTURE BUILDING CONSTRUCTION ON THE SITE. THIS FUTURE CONSTRUCTION WILL REQUIRE A SEPARATE OR UPDATED GRADING AND DRAINAGE PLAN.

AS PREVIOUSLY MENTIONED, THE F.I.R.M. PANEL DOES NOT IDENTIFY DOWNSTREAM STREET FLOODING ASSOCIATED WITH THE 100-YEAR RAINFALL EVENT. THE ALBUQUERQUE MASTER DRAINAGE STUDY (AMDS), VOLUME II PREPARED BY BOHANNAN-HUSTON DOES NOT IDENTIFY FLOODING OR RECOMMEND ANY STORM DRAINAGE IMPROVEMENTS IN THIS AREA, APPARENTLY SUPPORTING DOWNSTREAM CAPACITY. DESPITE THIS APPARENT JUSTIFICATION OF DOWNSTREAM CAPACITY, FREE DISCHARGE OF DEVELOPED RUNOFF FROM THIS SITE IS NOT APPROPRIATE WHEN CONSIDERED WITH KNOWLEDGE OF THE EXISTING DOWNSTREAM DRAINAGE PROBLEMS WITHIN UNM. IT IS FOR THIS REASON THAT THE AFOREMENTIONED MITIGATIVE MEASURES ARE PROVIDED IN ASSOCIATION WITH THIS PLAN TO REDUCE THE RATE OF DISCHARGE FROM THIS SITE TO IMPROVE THE DOWNSTREAM DRAINAGE CONDITIONS.

THIS REDUCTION IS MAINLY ACCOMPLISHED BY ON-SITE DETENTION PONDING TO THE MAXIMUM EXTENT POSSIBLE GIVEN EXISTING SITE GRADE CONSTRAINTS. DUE TO THE FACT THAT THIS IS A MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA, THE PROXIMITY TO EXISTING PUBLIC STORM DRAIN IMPROVEMENTS, THE RECENT DOWNSTREAM MODIFICATIONS WHICH SIGNIFICANTLY RELIEVED THE PRE-EXISTING BURDEN ON THE KATHRYN STORM DRAIN SYSTEM, THE REDUCED IMPACT ON PEAK FLOW RATES DUE TO DETENTION PONDING, AND THE WATER HARVESTING MEASURES PROVIDED BY THIS PLAN, THE PROPOSED DISCHARGE OF DEVELOPED RUNOFF FROM THIS SITE AT A RATE LESS THAN EXISTING IS APPROPRIATE. THIS PLAN ALSO IMPROVES THE CONVEYANCE OF SITE DRAINAGE TO PUBLIC STORM DRAIN AND RIGHT-OF-WAY BY SIGNIFICANTLY REDUCING THE AMOUNT OF SURFACE RUNOFF DISCHARGED DIRECTLY FROM BASIN B TO YALE BLVD. AND BY PROVIDING A DIRECT STORM DRAIN CONNECTION FROM BASIN A TO THE EXISTING PUBLIC STORM DRAIN INLET, THEREBY ELIMINATING THE EXISTING CONDITION IN WHICH SURFACE RUNOFF DRAINS ONTO ADJACENT PROPERTY. THIS PLAN HAS BEEN PREPARED WITH THE INTENT OF REDUCING THE DEVELOPED PEAK RATE OF DISCHARGE TO THE MAXIMUM EXTENT REASONABLY POSSIBLE IN ORDER TO IMPROVE AND NOT ADVERSELY IMPACT DOWNSTREAM DRAINAGE CONDITIONS.

GRADING PLAN:

THE GRADING PLAN ON SHEET 1 SHOWS: 1) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1' 0" INTERVALS AS DETERMINED FROM A TOPOGRAPHIC SURVEY PREPARED BY THE CITY OF ALBUQUERQUE DATED 08/95 AND SUPPLEMENTED 07/97, 2) PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1' 0" INTERVALS, 3) THE LIMIT AND CHARACTER OF EXISTING IMPROVEMENTS, 4) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 5) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES.

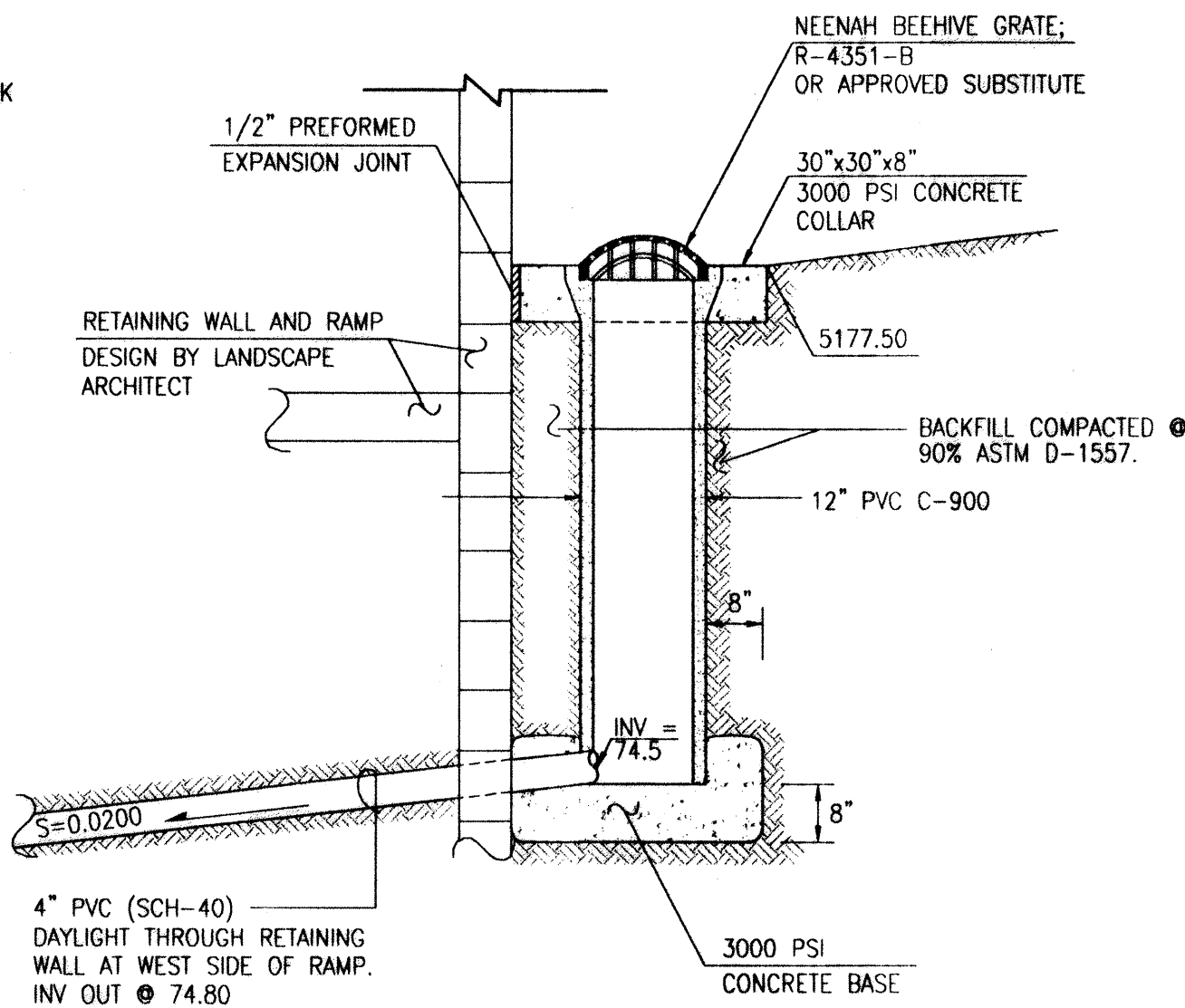
CALCULATIONS:

THE HYDROLOGIC CALCULATIONS, 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. THIS PROCEDURE HAS ALSO BEEN USED TO DEVELOP A RUNOFF HYDROGRAPH FOR THE PROPOSED DETENTION POND. AS SHOWN BY THESE CALCULATIONS, AN INCREASE IN THE PEAK RATE AND VOLUME OF DISCHARGE IS ANTICIPATED. ON-SITE DETENTION PONDING AS DEMONSTRATED BY THE HYDROGRAPH AND POND VOLUME CALCULATIONS SHOWN HEREON WILL MITIGATE THIS INCREASE.

THE HYDRAULIC CALCULATIONS, WHICH APPEAR HEREON, ANALYZE THE PROPOSED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. MANNING'S EQUATION AND THE ORIFICE EQUATION HAVE BEEN USED TO CALCULATE STORM DRAIN CAPACITIES AND STORM INLET ENTRANCE AND EXIT CONDITIONS. THE AVERAGE-END AREA METHOD HAS BEEN USED TO CALCULATE DETENTION POND VOLUME. AS SHOWN BY THESE CALCULATIONS, THE STRUCTURES PROPOSED HEREIN HAVE SUFFICIENT CAPACITY TO ACCEPT, CONVEY, DISCHARGE AND DETAIN THE DEVELOPED RUNOFF AS PROPOSED BY THIS PLAN.

CONCLUSION:

THE PROPOSED GRADING AND DRAINAGE PLAN FOR THE KOREAN WAR VETERANS PARK PROPOSES A RESPONSIBLE APPROACH TO MANAGING THE STORM WATER RUNOFF ASSOCIATED WITH THE PROPOSED CONSTRUCTION. THE IMPROVEMENTS CONSIST OF MODIFICATIONS TO AN EXISTING SITE WITHIN AN INFILL AREA. THE INTRODUCTION OF IMPERVIOUS AREA TO THE SITE WILL CAUSE AN INCREASE IN THE PEAK DISCHARGE RATE AND VOLUME OF RUNOFF CURRENTLY DRAINING TO PUBLIC RIGHT OF WAY AND STORM DRAIN. THIS INCREASE WILL BE MITIGATED THROUGH ONSITE DETENTION PONDING AS DESCRIBED HEREIN. NO DRAGAGE COVENANTS OR DPM DESIGN VARIANCES ARE REQUESTED AS PART OF THIS PLAN.



TYPICAL AREA DRAIN AND OUTLET SECTION (KEYED NOTE 13)
SCALE: 1" = 2'-0"

F.I.R.M. PANEL 353 OF 825
SCALE: 1" = 500'±

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), FOR LOCATION 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. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY 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.

VICINITY MAP
SCALE: 1" = 750'±

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.

EROSION CONTROL MEASURES:

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE 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. THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.
4. ANY AREAS OF EXCESS DISTURBANCE (TRAFFIC ACCESS, STORAGE YARD, EXCAVATED MATERIAL, ETC.) SHALL BE RE-SEEDDED ACCORDING TO C.O.A. SPECIFICATION 1012 "NATIVE GRASS SEEDING". THIS WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.

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CITY OF ALBUQUERQUE CAPITAL IMPLEMENTATION PROGRAM			
TITLE: KOREAN WAR VETERANS PARK DRAINAGE PLAN, CONSTRUCTION NOTES, SECTIONS AND DETAILS			
Design Review Committee	City Engineer Approval	Last Design Update	
City Project No.	5020.92	Zone Map No.	L-16-Z
Sheet	G2	Of	28

CALCULATIONS

SITE CHARACTERISTICS

1. PRECIPITATION ZONE = 2
2. $P_{6,100} = P_{360} = 2.35$ IN.
3. TOTAL AREA (A_T) = 14.12 AC.
4. EXISTING LAND TREATMENT

A. BASIN A (436,410 SF/10.02 AC)			
1) SUB-BASIN A-1 TREATMENT AREA (SF/AC)	%		
B	142,170/3.26	83	
C	2,500/0.06	01	
D	26,220/0.60	15	
2) SUB-BASIN A-2 TREATMENT AREA (SF/AC)	%		
B	17,960/0.41	94	
C	1,080/0.02	06	
3) SUB-BASIN A-3 TREATMENT AREA (SF/AC)	%		
B	242,640/5.57	98	
C	3,840/0.09	02	
B. BASIN B (178,480 SF/4.10 AC)			
TREATMENT AREA (SF/AC)	%		
B	146,880/3.37	82	
D	32,110/0.74	18	

5. DEVELOPED LAND TREATMENT

A. BASIN A (557,660 SF/12.80 AC)			
1) SUB-BASIN A-1 TREATMENT AREA (SF/AC)	%		
B	136,240/3.13	75	
C	4,950/0.11	03	
D	41,500/0.95	23	
2) SUB-BASIN A-2 TREATMENT AREA (SF/AC)	%		
B	17,960/0.41	94	
D	1,080/0.02	06	
3) SUB-BASIN A-3 TREATMENT AREA (SF/AC)	%		
B	220,640/5.07	90	
C	3,840/0.09	02	
D	22,000/0.51	09	
4) SUB-BASIN A-4 TREATMENT AREA (SF/AC)	%		
B	27,000/0.62	25	
D	82,450/1.89	75	
B. BASIN B (57,230 SF/1.31 AC)			
1) SUB-BASIN B-1 TREATMENT AREA (SF/AC)	%		
B	19,300/0.44	51	
D	18,730/0.43	49	
2) SUB-BASIN B-2 TREATMENT AREA (SF/AC)	%		
B	16,800/0.39	88	
C	2,400/0.06	13	

6. EXISTING CONDITIONS

A. BASIN A			
1) SUB-BASIN A-1			
a. VOLUME			
$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$			
$E_W = [(0.78)(3.26) + (1.13)(0.06) + (2.12)(0.60)] / (4.65) = 0.83$ IN.			
$V_{100} = (E_W / 12) A_T$			
$V_{100} = (0.83 / 12)(170,890) = 11,820$ CF			
b. PEAK DISCHARGE			
$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$			
$Q_P = Q_{100} = (2.28)(3.26) + (3.14)(0.06) + (4.70)(0.60) = 10.4$ CFS			
2) SUB-BASIN A-2			
a. VOLUME			
$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$			
$E_W = [(0.78)(0.41) + (1.13)(0.02)] / (0.43) = 0.80$ IN.			
$V_{100} = (E_W / 12) A_T$			
$V_{100} = (0.80 / 12)(19,040) = 1,270$ CF			
b. PEAK DISCHARGE			
$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$			
$Q_P = Q_{100} = (2.28)(0.41) + (3.14)(0.02) = 1.0$ CFS			
3) SUB-BASIN A-3			
a. VOLUME			
$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$			
$E_W = [(0.78)(5.57) + (1.13)(0.09)] / (5.66) = 0.79$ IN.			
$V_{100} = (E_W / 12) A_T$			
$V_{100} = (0.79 / 12)(246,480) = 16,230$ CF (GROSS)			
$V_{100} = 12,030$ CF (NET DUE TO EXISTING WATER HARVESTING FEATURE WHICH REDUCES VOLUME BY 4,200 CF)			
b. PEAK DISCHARGE			
$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$			
$Q_P = Q_{100} = (2.28)(5.57) + (3.14)(0.09) = 13.0$ CFS (GROSS)			
$Q_P = Q_{100} = 11.3$ CFS (NET DUE TO EXISTING WATER HARVESTING FEATURE WHICH REDUCES DISCHARGE BY 1.7 CFS)			
B. BASIN B			
1. VOLUME			
$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$			
$E_W = [(0.78)(3.37) + (2.12)(0.74)] / (4.10) = 1.02$ IN.			
$V_{100} = (E_W / 12) A_T$			
$V_{100} = (1.02 / 12)(178,480) = 15,170$ CF			
2. PEAK DISCHARGE			
$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$			
$Q_P = Q_{100} = (2.28)(3.37) + (4.70)(0.74) = 11.2$ CFS			

7. DEVELOPED CONDITIONS

A. BASIN A			
1) SUB-BASIN A-1			
a. VOLUME			
$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$			
$E_W = [(0.78)(3.13) + (1.13)(0.11) + (2.12)(0.95)] / (4.19) = 1.09$ IN.			
$V_{100} = (E_W / 12) A_T$			
$V_{100} = (1.09 / 12)(182,690) = 16,590$ CF			
b. PEAK DISCHARGE			
$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$			
$Q_P = Q_{100} = (2.28)(3.13) + (3.14)(0.11) + (4.70)(0.95) = 11.9$ CFS			
2) SUB-BASIN A-2			
a. VOLUME			
$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$			
$E_W = [(0.78)(0.41) + (2.12)(0.02)] / (0.43) = 0.84$ IN.			
$V_{100} = (E_W / 12) A_T$			
$V_{100} = (0.84 / 12)(19,040) = 1,330$ CF			
b. PEAK DISCHARGE			
$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$			
$Q_P = Q_{100} = (2.28)(0.41) + (4.70)(0.02) = 1.0$ CFS			
3) SUB-BASIN A-3			
a. VOLUME			
$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$			
$E_W = [(0.78)(5.07) + (1.13)(0.09) + (2.12)(0.51)] / (5.67) = 0.91$ IN.			
$V_{100} = (E_W / 12) A_T$			
$V_{100} = (0.91 / 12)(246,480) = 18,690$ CF (GROSS)			
$V_{100} = 14,490$ CF (NET DUE TO EXISTING WATER HARVESTING FEATURE WHICH REDUCES VOLUME BY 4,200 CF)			
b. PEAK DISCHARGE			
$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$			
$Q_P = Q_{100} = (2.28)(5.07) + (3.14)(0.09) + (4.70)(0.51) = 14.2$ CFS (GROSS)			
$Q_P = Q_{100} = 12.5$ CFS (NET DUE TO EXISTING WATER HARVESTING FEATURE WHICH REDUCES DISCHARGE BY 1.7 CFS)			
4) SUB-BASIN A-4			
a. VOLUME			
$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$			
$E_W = [(0.78)(0.62) + (2.12)(1.89)] / (2.51) = 1.79$ IN.			
$V_{100} = (E_W / 12) A_T$			
$V_{100} = (1.79 / 12)(109,450) = 16,330$ CF			
b. PEAK DISCHARGE			
$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$			
$Q_P = Q_{100} = (2.28)(0.62) + (4.70)(1.89) = 10.3$ CFS			
B. BASIN B			
1) SUB-BASIN B-1			
a. VOLUME			
$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$			
$E_W = [(0.78)(0.44) + (2.12)(0.43)] / (0.87) = 1.44$ IN.			
$V_{100} = (E_W / 12) A_T$			
$V_{100} = (1.44 / 12)(38,030) = 4,560$ CF			
b. PEAK DISCHARGE			
$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$			
$Q_P = Q_{100} = (2.28)(0.44) + (4.70)(0.43) = 3.0$ CFS			
2) SUB-BASIN B-2			
a. VOLUME			
$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$			
$E_W = [(0.78)(0.39) + (1.13)(0.06)] / (0.45) = 0.83$ IN.			
$V_{100} = (E_W / 12) A_T$			
$V_{100} = (0.83 / 12)(19,200) = 1,330$ CF			
b. PEAK DISCHARGE			
$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$			
$Q_P = Q_{100} = (2.28)(0.39) + (3.14)(0.06) = 1.1$ CFS			

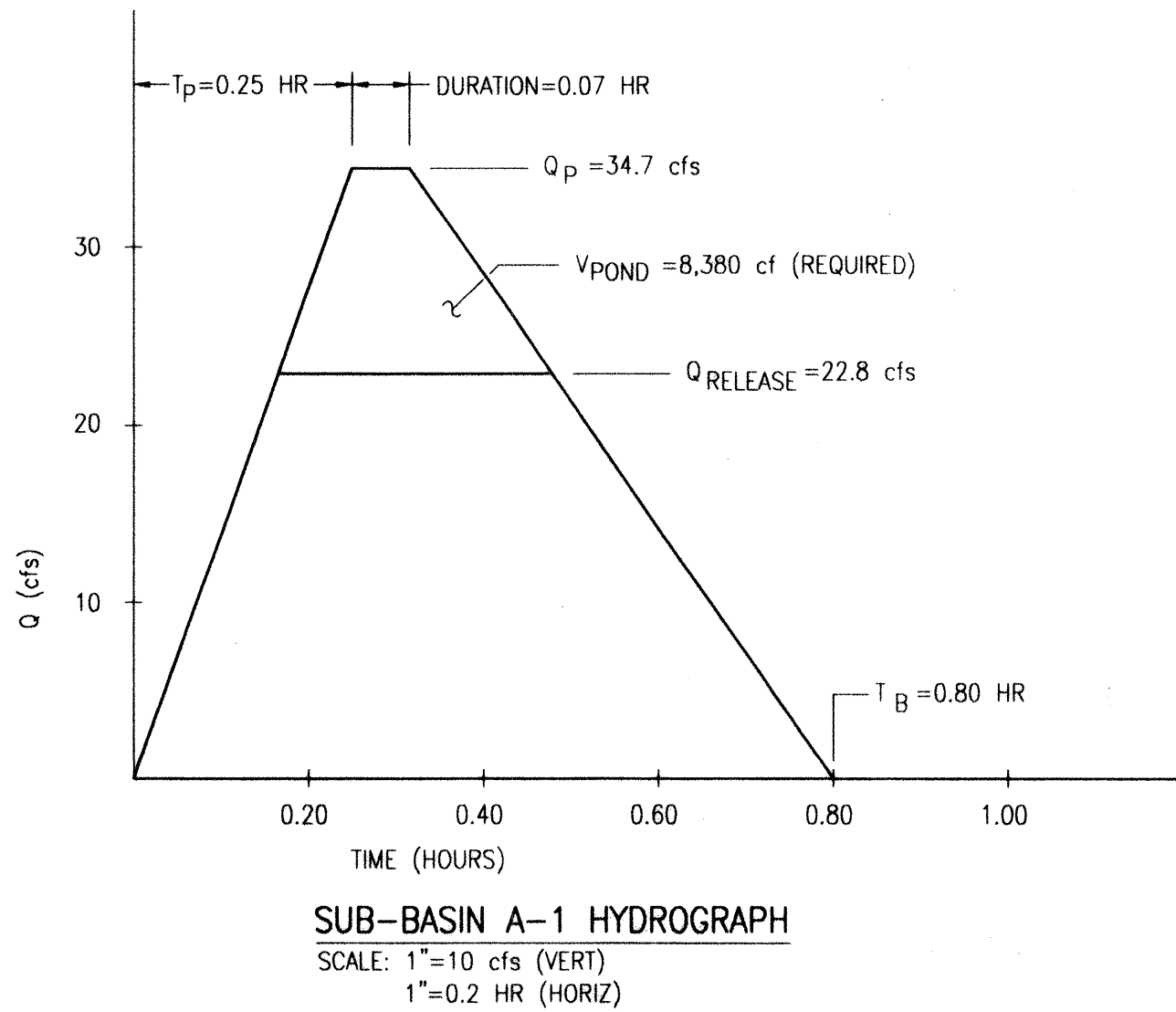
8. STORM DRAIN CALCULATIONS

A. SUB-BASIN A-4 HYDRAULIC CALCULATIONS ($Q_{100} = 10.3$ CFS)			
1. PIPE CAPACITY (MANNING'S EQUATION)			
$d = 18"$			
$n = 0.013$ (PVC)			
$s = 0.01$			
$Q_{CAP} = 10.5$ CFS $> Q_{100}$			
2. GRATE INLET CONDITION (ORIFICE EQUATION)			
$C = 0.6$			
$h = 8"$ (CURB HEIGHT)			
$g = 32.2$ FT/S ²			
$A_{EFF} = 1/2A$ OPENINGS $= 2.28$ FT ² /GRATE			
$Q_{CAP} = CA(2gh)^{1/2} = 9.0$ CFS PER GRATE			
USE DOUBLE GRATE INLET			
3. PIPE ENTRANCE CONDITION (ORIFICE EQUATION)			
$C = 0.6$			
$h = 6.5'$			
$g = 32.2$ FT/S ²			
$A = 1.77$ SF (18" PIPE)			
$Q_{CAP} = CA(2gh)^{1/2} = 21.7$ CFS $> Q_{100}$			
4. 12" PIPE CAPACITY (MANNING'S EQUATION)			
$Q_{100} = 10.3$ CFS			
$d = 12"$			
$n = 0.013$ (PVC)			
$S = 0.02$			
$Q_{CAP} = 5.0$ CFS			
REMAINING FLOW WILL "SURGE" INTO SUB-BASIN A-3 THROUGH SURGE INLET			
$Q_{SURGE} = 10.3 - 5.0 = 5.3$ CFS			

B. SUB-BASIN A-1 HYDROGRAPH CALCULATIONS

$T_B = (2.107 * E * A_T / Q_P) - (0.25 * A_D / A_T)$ (A-13)
$Q_P = (11.9 + 12.5 + 10.3) = 34.7$ CFS (FLOW FROM A1, A3, A4)
$A_T = (4.19 + 5.67 + 2.51) = 12.37$ AC (AREA FROM A1, A3, A4)
$A_D = (0.95 + 0.51 + 1.89) = 3.35$ AC (AREA FROM A1, A3, A4)
$E = [(0.78)(8.82) + (1.13)(0.20) + (2.12)(3.35)] / (12.37) = 1.15$ IN.
$T_B = (2.107 * 1.15 * 12.37 / 34.7) - (0.25 * 3.35 / 12.37) = 0.80$ HR.
$T_P = (0.7 * T_C) + ((1.6 - (A_D / A_T)) / 12)$
$T_C = 12$ MIN $= 0.20$ HR
$T_P = (0.7)(0.20) + ((1.6 - (3.35 / 12.37)) / 12) = 0.25$ HR
DURATION OF PEAK $= (0.25)(A_T / A_T) = (0.25)(3.35 / 12.37) = 0.07$ HR.
C. SUB-BASIN A-1 HYDRAULIC CALCULATIONS ($Q_{100} = 29.7$ CFS SURFACE, 5 CFS IN 12" STORM DRAIN)
1. GRATE INLET CONDITION (ORIFICE EQUATION)
$C = 0.6$
$h = 24"$ (MAX CURB HEIGHT)
$g = 32.2$ FT/S ²
$A_{EFF} = 1/2A$ OPENINGS $= 2.28$ FT ² /GRATE
$A_{EFF} = (2)(2.28) = 4.56$ SF (DOUBLE GRATE)
$Q = CA(2gh)^{1/2} = 31$ CFS $> Q_{100}$ (NOT LIMITING)
2. 30" PIPE CAPACITY (MANNING'S EQUATION)
$Q_{ULT} = 34.7$ CFS (ASSUMING FUTURE FREE DISCHARGE)
$n = 0.013$ (RCP)
$S = 0.0125$
$d = 30"$
$Q_{CAP} = 45.9$ CFS $> Q_{100}$
3. ORIFICE PLATE CALCULATIONS (ORIFICE EQUATION)
$Q = CA(2gh)^{1/2}$
$A = 1.77$ SF (18" DIAMETER OPENING)
$C = 0.6$
$g = 32.2$ FT/S ²
$h = 7.15'$
$Q = 22.8$ CFS
9. POND VOLUME CALCULATIONS
$V_{REQUIRED} = 8,380$ CF
$A_{67} = 0$ SF
$A_{68} = 2480$ SF
$A_{69} = 14,360$ SF
$A_{69} + 1/2[(0 + 2480) + (2480 + 14,360)] = 9,660$ CF $> V_{REQUIRED}$
10. COMPARISON

A. BASIN A (DIRECTLY TO STORM DRAIN)			
1) $\Delta V_{100} = (16,590 + 1,330 + 14,490 + 16,330) - (11,820 + 1,270 + 12,030) = 23,620$ CF (INCREASE)			
2) ΔQ_{100} (GROSS) $= (11.9 + 1.0 + 12.5 + 10.3) - (10.4 + 1.0 + 11.3) = 13.0$ CFS (INCREASE)			
3) ΔQ_{100} (NET THROUGH DETENTION) $= (22.8 + 1.0) - (10.4 + 1.0 + 11.3) = 1.1$ CFS (INCREASE)			
B. BASIN B (TO STORM DRAIN VIA YALE)			
1) $\Delta V_{100} = 15,170 - (4,560 + 1,330) = 9,280$ CF (DECREASE)			
2) $\Delta Q_{100} = 11.2 - (3.0 + 1.1) = 7.1$ CFS (DECREASE)			
C. OVERALL SITE COMPARISON (INCLUDES DETENTION)			
1) $\Delta V_{100} = 23,620 - 9,280 = 14,340$ CF (INCREASE)			
2) $\Delta Q_{100} = 7.1 - 1.1 = 6.0$ CFS (DECREASE)			



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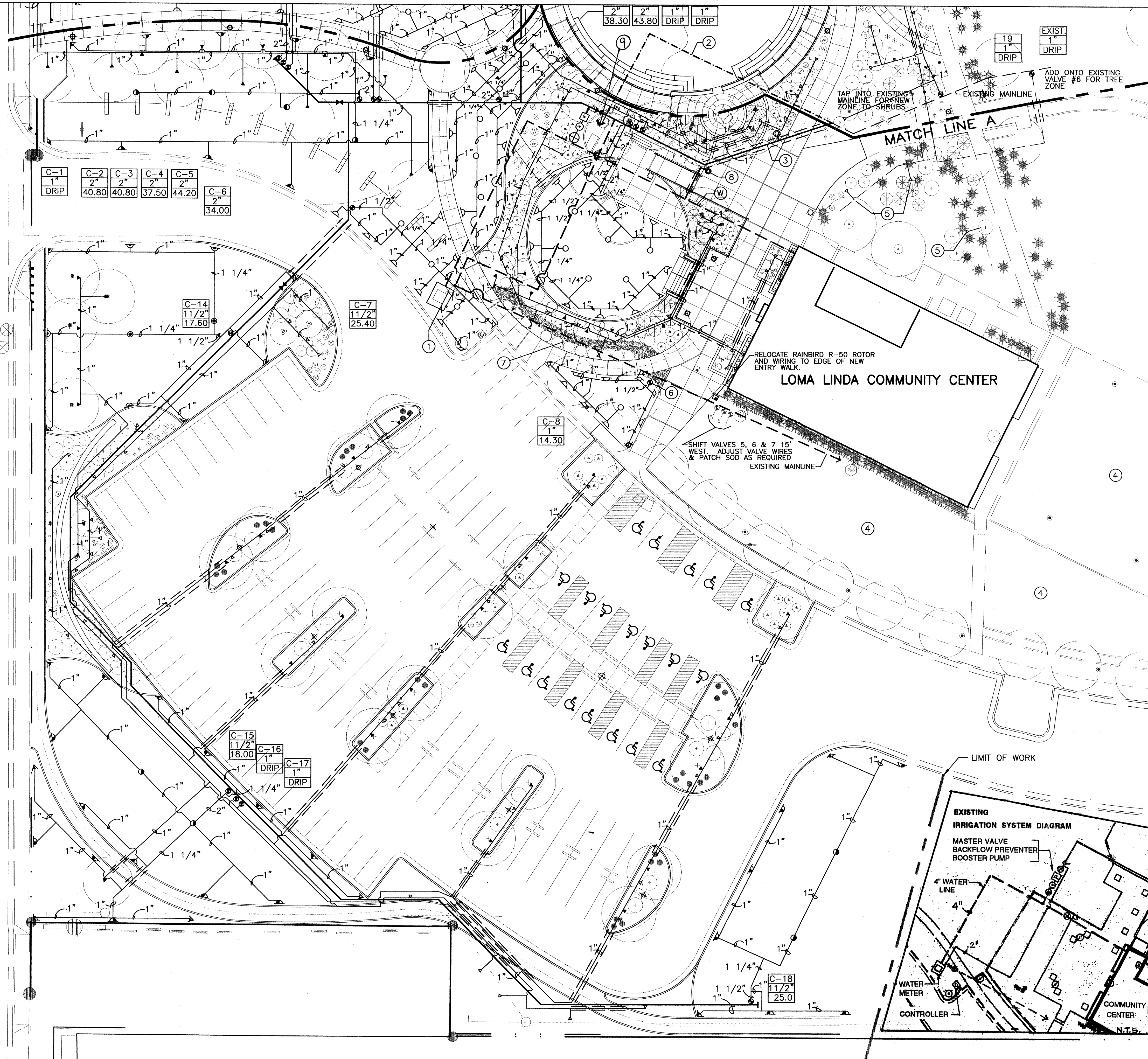
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CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

TITLE: KOREAN WAR VETERANS PARK
CALCULATIONS

Design Review Committee	City Engineer Approval	Update	10/29/99	10/29/99

YALE BLVD, S.E.



KEYED NOTES:

- 1 PRESERVE AND PROTECT EXISTING GATE VALVE.
- 2 EXISTING MAIN LINE TO BE REMOVED.
- 3 PROPOSED LOCATION FOR REPLACEMENT MAIN LINE.
- 4 PRESERVE AND PROTECT IRRIGATION TO EXISTING LANDSCAPE IMPROVEMENTS. THE CONTRACTOR IS TO MAINTAIN THE EXISTING IRRIGATION SYSTEM IN GOOD WORKING ORDER DURING THE DURATION OF CONSTRUCTION. CONTRACTOR IS TO UNDERTAKE ALL NECESSARY MAINTENANCE OF THE EXISTING IRRIGATION SYSTEM TO MAINTAIN EXISTING LANDSCAPE IN A HEALTHY AND CONSTRUCTION. HAND DIG WITH IN DRIP LINE FOR ALL ATTRACTIVE CONDITION.
- 5 ADD MULTI-OUTLET EMITTERS TO EXISTING LATERAL LINE TO IRRIGATE SHRUBS AND PERENNIALS.
- 6 ADD NEW VALVE TO EXISTING MAINLINE.
- 7 REMOVE VALVES 1,2,3 & 4 AND ALL ASSOCIATED HEADS OF EXISTING SYSTEM. PRESERVE MAINLINE.
- 8 DRINKING FOUNTAIN, SEE DETAIL 3, SHT. 13.
- 9 EXISTING BACKFLOW PREVENTER, MASTER VALVE & BOOSTER PUMP (SEE DIAGRAM BELOW)

GENERAL NOTES:

1. FOR COMPLETE IRRIGATION SCHEDULE SEE SHT. 13

SYMBOLS LEGEND ABBREVIATED

- SPRAY HEADS
- ROTARY HEAD
- ROTARY HEAD
- ROTARY HEAD
- MULTI OUTLET EMITTERS-SHRUBS
- MULTI OUTLET EMITTER-TREES
- BOOSTER PUMP
- FLOW METER WITH BOX, COVER AND EXTENSIONS
- IRRIGATION VALVE
- BACKFLOW PREVENTER
- IRRIGATION CONTROLLER
- LATERAL LINE
- MAIN LINE
- SLEEVE
- STATION NUMBER
- VALVE SIZE
- GALLONS PER MINUTE
- EXISTING MAIN WATER LINE
- EXISTING MASTER LINE TO BE REMOVED
- QUICK COUPLER VALVE BOX WITH COVER AND EXTENSIONS
- RELOCATED VALVE
- EXISTING IRRIGATION VALVE
- GATE VALVE

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CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

TITLE: PROJECT: KOREAN WAR VETERANS PARK
SHEET: IRRIGATION PLAN-SOUTH AREA

DESIGNED BY ASM	DRAWN BY WBT	CHECKED BY WSP	DATE 4-99	DATE 4-99	DATE 5-99
NO.	DATE	REVISIONS	BY	DATE	DATE
1	8/95	COA	1	7/97	COA
2	7/97	COA	2		

APPROVED
AUG 13 1999
DESIGN REVIEW COMMITTEE

APPROVED
AUG 13 1999
CITY ENGINEER

City Project No. 5020.92

Zone Map No. L-16-Z

Sheet 11 of 28

HUNTER I-40

10	11	12	13
2"	2"	1"	1"
38.30	43.80	DRIP	DRIP

19" DRIP

EXIST 1" DRIP

ADD ONTO EXISTING VALVE #6 FOR TREE ZONE

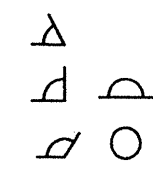
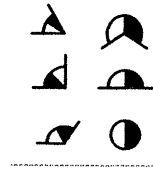
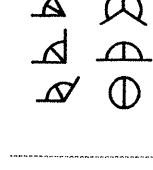
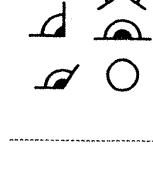

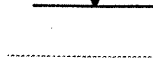
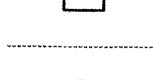
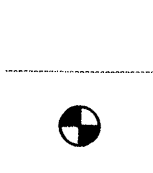
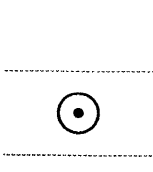
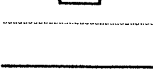
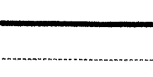
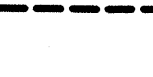
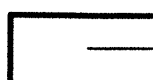

TAP INTO EXISTING MAINLINE FOR NEW ZONE TO SHRUBS

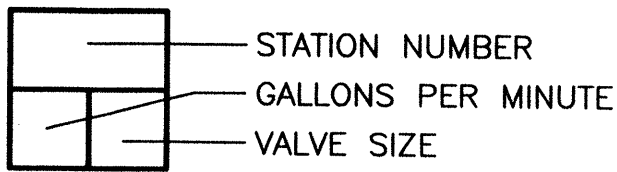
EXISTING MAINLINE

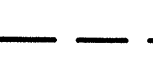



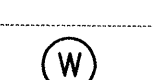

MATCH LINE A

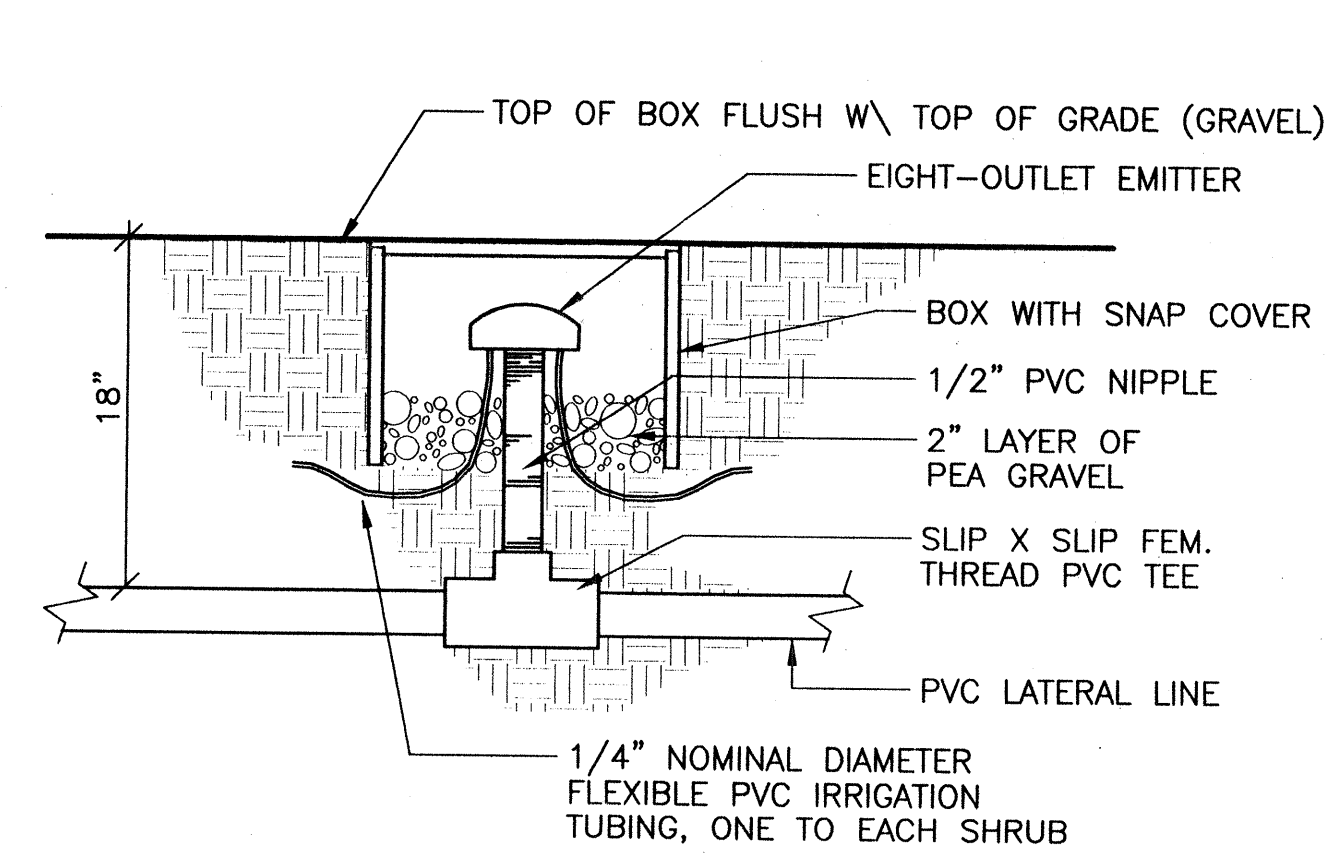
City Project No.	5020.92	Zone Map No. L-16-Z	Sheet 12	Of 28
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IRRIGATION SCHEDULE

SYMBOL	TYPE	MODEL	MANUFACTURER	DESCRIPTION	NOTES
	SPRAY HEADS	PS-04-(15)-A	HUNTER	4" POP-UP SPRAY HEAD, 40 PSI, GREEN NOZZLE 15' RADIUS	INSTALL PER COA DETAIL 2709
	ROTARY POP-UP HEAD	I-20-ADV-2.5LA	HUNTER	4" POP-UP ROTARY HEAD, 40 PSI, 2.5LA NOZZLE, 30' RADIUS	INSTALL PER COA DETAIL 2709
	ROTARY POP-UP HEAD	I-20-ADV-3.5	HUNTER	4" POP-UP ROTARY HEAD, 50 PSI, 3.5 NOZZLE, 42' RADIUS	INSTALL PER COA DETAIL 2709
	ROTARY POP-UP HEAD	I-20-ADV-4.5LA	HUNTER	4" POP-UP ROTARY HEAD, 40 PSI, 4.5LA NOZZLE, 34' RADIUS	INSTALL PER COA DETAIL 2709
	MULTI OUTLET EMITTER-SHRUBS	XBD-80	RAINBIRD	MULTI OUTLET EMITTER IN BOX	INSTALL PER DETAIL 1 SHEET I-3
	MULTI OUTLET EMITTER-TREES	XBD-80	RAINBIRD	MULTI OUTLET EMITTER IN BOX	INSTALL PER DETAIL 1 SHEET I-3
	BOOSTER PUMP	5CLC	GOULD	1-STAGE SUBMERSIBLE BOOSTER PUMP	INSTALL PER DETAIL 2 SHEET I-3
	FLOW METER W\ MASTERVALVE W\ BOX COVER AND EXTENSIONS	1730B-P28-18-910-F	BERMAD BROOKS	PROVIDE AND INSTALL 1-2" BERMAD FLOW METER IN ASSEMBLY SERVICING THE IRRIGATION SYSTEM.	INSTALL PER COA DETAIL 2701A
	PLASTIC REMOTE CONTROL ZONE VALVE, BALL VALVE BOX W\ LOCKING COVER	PEB-PRS-B SERIES W\ BALL VALVE 1730B-P28-18	RAINBIRD SPEARS BROOKS	-	INSTALL PER COA DETAIL 2703 SIZE AS INDICATED ON DWGS.-USE RED COLORED WIRES FOR ZONE VALVES, WHITE FOR COMMON. LID COLOR GREEN IN GRASS/ GREY IN GRAVEL
	BACKFLOW PREVENTER	3" ø	FEBCO	-	INSTALL PER COA DETAIL 2701A
	IRRIGATION CONTROLLER			SEE NOTE BELOW	EXISTING CONTROLLER
	LATERAL LINE	SCHEDULE 40 PVC		-	SIZE AS INDICATED ON PLAN
	MAIN LINE	SCHEDULE 40 PVC		-	3" DIAMETER
	SLEEVE	SCHEDULE 200 PVC		-	SIZE 2 TIMES LARGER THAN PIPE SIZE. ONE SLEEVE PER PIPE PROVIDE SEPARATE SLEEVE FOR WIRE BUNDLE



	EXISTING MAIN LINE				PRESERVE AND PROTECT. MODIFY AS REQUIRED TO PRESERVE EXISTING IRRIGATION THAT IS TO REMAIN
	EXISTING MASTER LINE				REMOVE. SEE KEYED NOTE ON PLAN.
	QUICK COUPLER VALVE BOX WITH COVER AND EXTENSIONS	33DRC 1730B-P28-18	RAINBIRD	QUICK COUPLER WITH BROOKS BOX	INSTALL PER COA DETAIL 2708
	EXISTING IRRIGATION VALVE				
	GATE VALVE				INSTALL PER COA DETAIL 2707
	EXISTING WATER METER				RELOCATE AS PER PLANS



NOTE:
RAINBIRD XERIBIRD XBD-80
8-OUTLET THREADED EMITTER ON RISER IN BOX
INSTALL WITH:
RAINBIRD DT-025 1/4" VINYL DISTRIBUTION TUBING
RAINBIRD DBC-025 BUG CAP
NDS-108 BC-S, SAND COLORED VALVE BOX WITH SCREW IN LID
RAINBIRD XERIBUG XB-20 EMITTERS FOR TREES, 3 PER TREE
RAINBIRD XERIBUG XB-10 EMITTERS FOR SHRUBS, 1 PER SHRUB (UNLESS NOTED OTHERWISE) ONE XBD-80 PER 6-8 SHRUBS
RAINBIRD RYB-100-150
1" WYE FILTER, 150 MESH

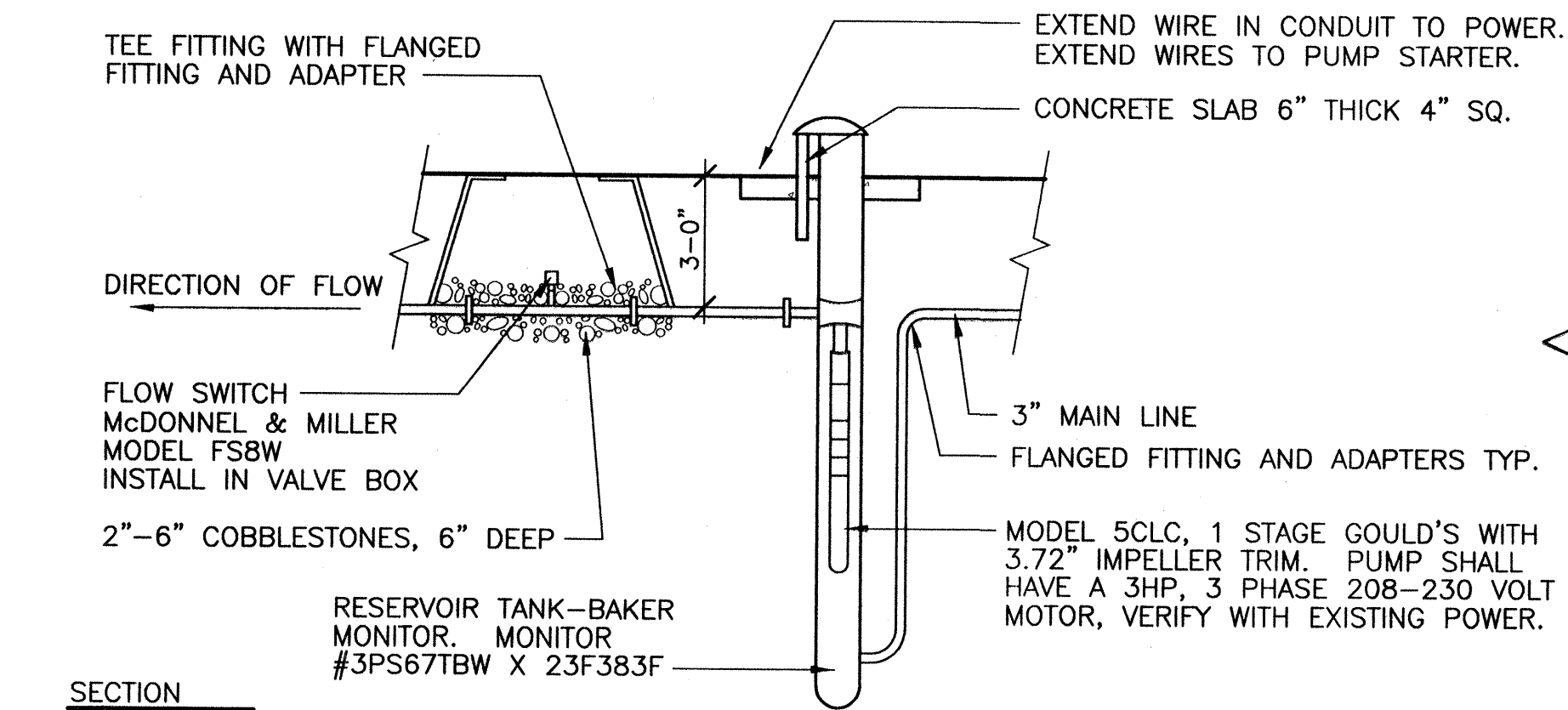
- NOTES:
1. DRINKING FOUNTAIN AS AVAILABLE FROM "MOST DEPENDABLE FOUNTAIN, CO." 4697 WINCHESTER, MEMPHIS TN. 38118. TEL: 1-800-552-6331. CONTACT: LYNN GRIFFIN.
2. LOCAL REPRESENTATIVE: EXERPLAY, INC. TEL: 1-505-821-9109.
3. VALVE BOX WITH VALVE AND PLUGGED TEE FOR DRAIN DOWN. LOCATE IN ADJACENT PLANTER BED.

VALVE SCHEDULE

VALVE NO.	VALVE SIZE	TOTAL GPM	HEAD TYPE	PRECIP. RATE	RUN TIME MINUTES/ø hr. Period	INCHES/ MONTH	PLANT MATERIAL	CONTROLLER C-1, C-2
1	1"		DRIP	xx	x x	xx	TREES	C-2
2	2"	40.80	ROTARY	.25 IN./HR.	2 HR.	xx	TURF	C-2
3	2"	40.80	ROTARY	.25 IN./HR.	2 HR.	xx	TURF	C-2
4	2"	37.50	ROTARY	.41 IN./HR.	1 HR. 13 MIN.	xx	NATIVE GRASS	C-2
5	2"	44.20	ROTARY	.28 IN./HR.	2 HR.	xx	TURF	C-2
6	2"	34.0	ROTARY	.35 IN./HR.	1 HR. 26 MIN.	xx	TURF	C-2
7	1 1/2"	25.40	SPRAY	1.18 IN./HR.	25 MIN.	xx	NATIVE GRASS	C-2
8	1"	14.30	SPRAY	1.96 IN./HR.	15 MIN.	xx	NATIVE GRASS	C-1
9	2"	55.27	SPRAY	1.4 IN./HR.	22 MIN.	xx	NATIVE GRASS	C-2
10	2"	38.30	SPRAY	1.82 IN./HR.	17 MIN.	xx	NATIVE GRASS	C-2
11	2"	43.80	SPRAY	1.65 IN./HR.	18 MIN.	xx	NATIVE GRASS	C-1
12	1"		DRIP	xx	x x	xx	SHRUBS	C-1
13	1"		DRIP	xx	x x	xx	TREES	C-1
14	1 1/2"	17.60	ROTARY	.27 IN./HR.	1 HR. 50 MIN.	xx	NATIVE GRASS	C-2
15	1 1/2"	18.00	ROTARY	.23 IN./HR.	2 HR. 10 MIN.	xx		C-2
16	1"		DRIP	xx	xx	xx	SHRUBS	C-2
17	1"		DRIP	xx	xx	xx	TREES	C-2
18	1 1/2"	25.00	ROTARY	.35 IN./HR.	1 HR. 26 MIN.	xx	NATIVE GRASS	C-2
19	1"		DRIP	xx	xx	xx	SHRUBS	C-1

GENERAL NOTES

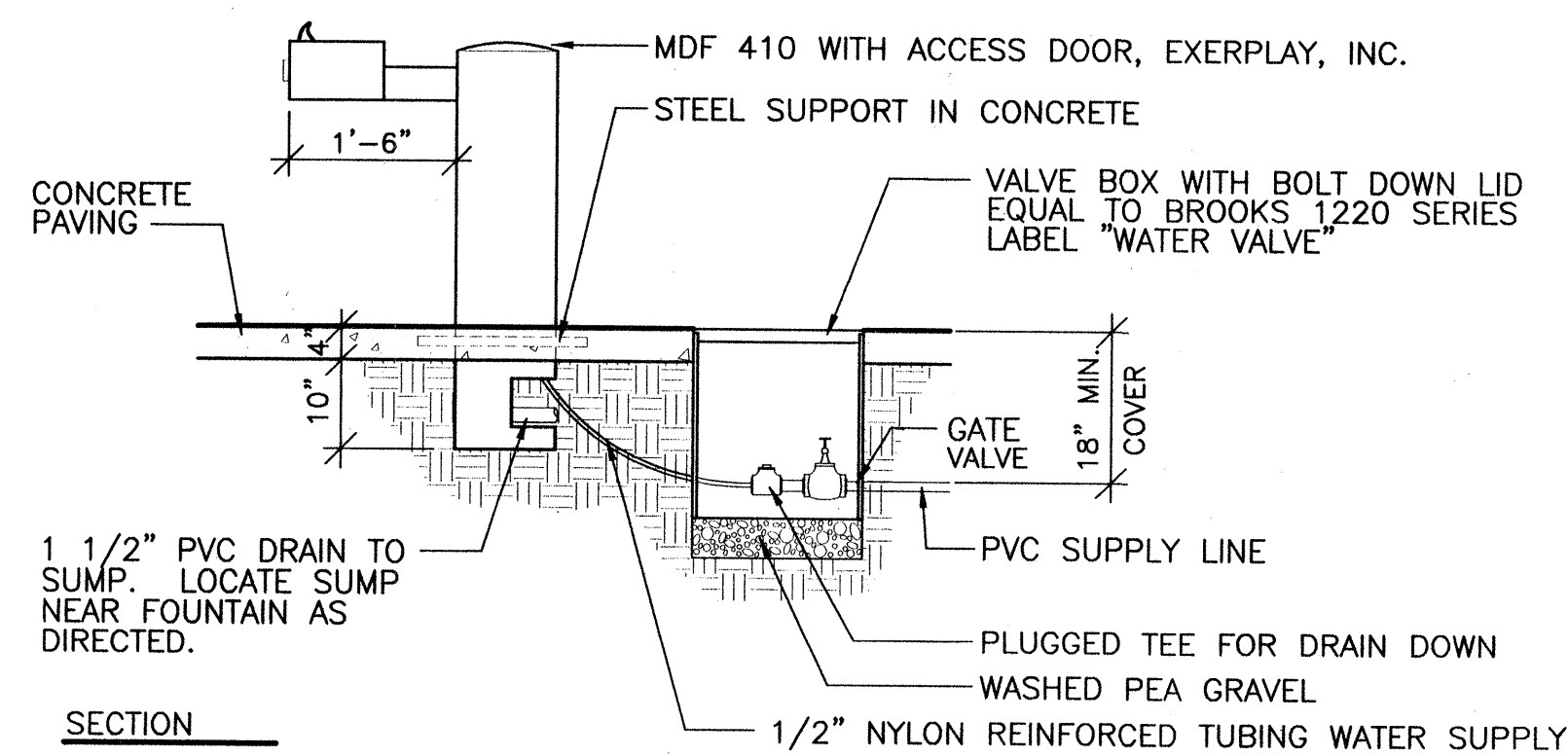
1. CONTRACTOR IS TO WIRE ALL PROPOSED VALVES TO THE EXISTING F-UNIT IRRINET CONTROLLER. THE CONTRACTOR IS TO PROVIDE AND INSTALL AN EXPANSION BOARD TO THE EXISTING CONTROLLER TO ACCOMMODATE THE ADDITIONAL VALVES.



- NOTES:
1. PUMP CONTROL SHALL BE A FURNAS CLASS 87 PUMP PANEL NEMA 3R ENCLOSURE WITH A FUSIBLE DISCONNECT. THE CONTROL SHALL HAVE A 10 SECOND DELAY AND A 60 SECOND OFF DELAY. THE AUTOMATIC POSITION. THE PUMP IN THE AUTOMATIC POSITION WILL BE CONTROLLED BY THE FLOW SWITCH.
2. THE FLOW SWITCH SHALL BE SET TO TURN ON AT 40 GPM.
3. ALL VALVE BOXES, COVERS AND EXTENSIONS SHALL MATCH SAME MODELS AS FOR ZONE VALVES.

2 SUBMERSIBLE BOOSTER PUMP AND FLOW SWITCH

NTS



3 DRINKING FOUNTAIN

NTS

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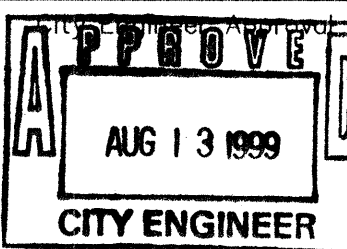
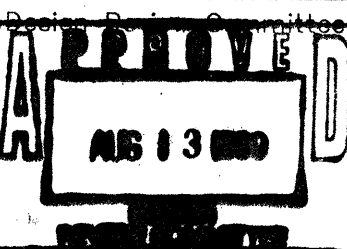
Kells and Craig

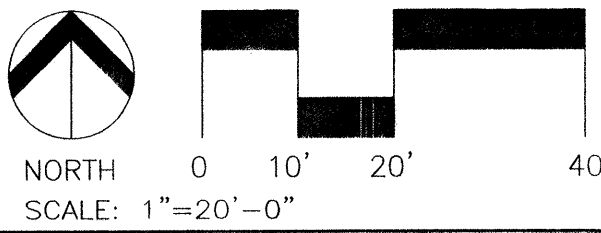
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CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

TITLE: PROJECT: KOREAN WAR VETERANS PARK
SHEET: IRRIGATION LEGEND/DETAILS



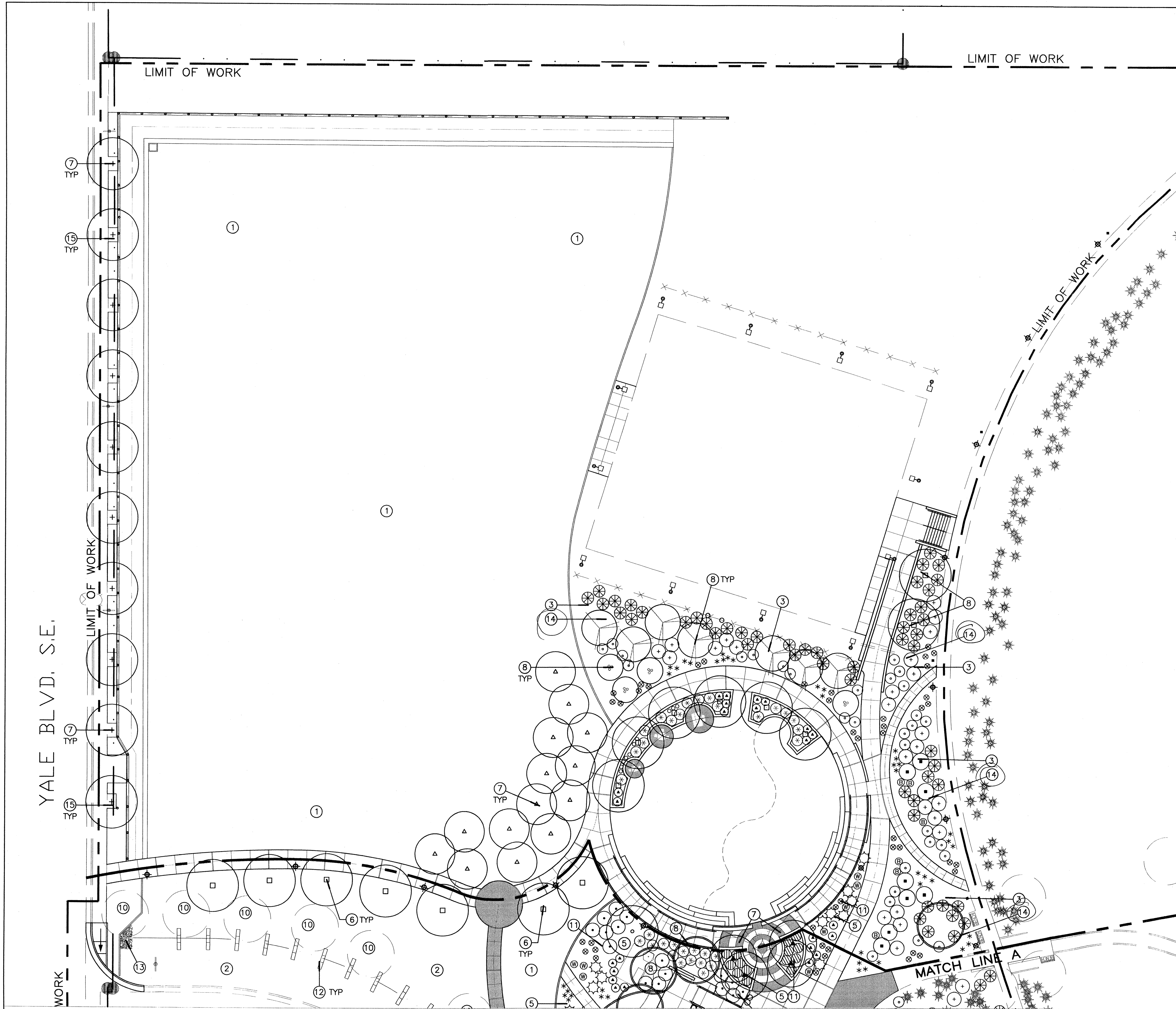


- | SYM | COMMON NAME |
|-----|---------------------------|
| ⊕ | PRAIRIE SAGE |
| ☼ | SHADSCALE |
| ⊙ | BLUE MIST |
| ⊙ | MOUNTAIN MAHOGANY |
| ⊕ | CHAMISA |
| ⊙ | APACHE PLUME |
| ⊙ | WESTERN SAND CHERRY |
| ☼ | THREE LEAF SUMAC |
| ☼ | COYOTE WILLOW |
| * | SOAP WEED |
| ⊕ | BEAR BERRY COTONEASTER |
| ⊕ | BEARGRASS |
| ⊕ | WINTER JASMINE |
| ● | PRICKLY PEAR CACTUS |
| ⊕ | 'BOWLES MAUVE' WALLFLOWER |
| ○ | MEXICAN EVENING PRIMROSE |
| ⊙ | IRENE ROSEMARY |

	Mo./Day/Yr.		Mo./Day/Yr.

Sheet Of
P1 28

BENCH MARKS		AS-BUILT INFORMATION	
PROJECT BENCHMARK:	CITY OF ALBUQUERQUE BENCHMARK "7-L15. A 3 1/4 ALUMINUM CAP SET IN DRILL HOLE, FLUSH WITH THE TOP CURB. STATIONED IS STAMPED "ACS, 7-L15, 1984". LOCATED 56.2' NORTHWEST OF YALE BLVD. AND KATHRYN AVE.	CONTRACTOR:	
ELEVATION = 5161.47' (M.S.L.D.)		WORK STARTED BY:	DATE
T.B.M. = TOP OF STORM DRAIN MANHOLE RIM.		ACCEPTANCE BY:	DATE
ELEVATION = 5165.43 (M.S.L.D.)		REPERATION BY:	DATE
		DESIGNED BY:	DATE
		RECORDED BY:	DATE
		NO.	



KEYED NOTES:

- 1 TURF GRASS. SEE SHT. P3 FOR SPECIFICATIONS.
- 2 BUFFALO-BLUE GRAMMA NATIVE GRASS. SEE SHT. P3 FOR SPECIFICATIONS.
- 3 NATIVE GRASS/PERENNIAL MIX. SEE SHT. P3, FOR SPECIFICATIONS.
- 4 NATIVE GRASS MIX, SEE SHT.P3 FOR SPECIFICATIONS.
- 5 4" DEPTH BARK MULCH PER COA STD. SPECIFICATIONS.
- 6 INSTALL TREE PER COA STD. DETAIL 2713.
- 7 INSTALL TREE PER COA STD. DETAIL 2715.
- 8 INSTALL TREE PER COA STD. DETAIL 2714.
- 9 INSTALL TREE PER COA STD. DETAIL 2716.
- 10 EXISTING TREE TO REMAIN. PRESERVE AND PROTECT THE AREA WITHIN THE DRIP ZONE OF THE TREE DURING CONSTRUCTION. HAND DIG WITH IN DRIP LINE FOR ALL NEW WORK TO AVOID DAMAGING THE ROOT SYSTEM.
- 11 INSTALL SHRUBS AND PERENNIALS PER COA STD. DETAIL 2718. SEE SPECIFICATIONS FOR AMENDED SOIL ON SHT. P3.
- 12 HAY BALE SWALE IN NATIVE GRASS AREA, SEE DETAIL 4 & 8 SHT. D2.
- 13 SUMP AT STRAWBALE SWALE, SEE DETAIL 5 SHT. D2.
- 14 1" DEPTH GRAVEL MULCH OVER SEEDED PERENNIAL/NATIVE GRASS MIX.
- 15 4" DEPTH GRAVEL MULCH OVER FILTER FABRIC.
- 16 COBBLE SWALE/INFILTRATION FEATURE, SEE DETAIL 6 SHT. D2.

GENERAL NOTES:

1. ALL SHRUBS TO BE INSTALLED PER COA STD. DETAIL 2117 UNLESS OTHERWISE SPECIFIED.
2. GRAVEL MULCH TO BE ANGULAR TO SUB ANGULAR 3/8" CRUSHED STONE.
3. SEE SHT. P3 FOR FULL PLANTING SCHEDULE AND NOTES.

SYMBOLS LEGEND

SYM	COMMON NAME	SYM	COMMON NAME
⊙	DESERT WILLOW	⊕	PRAIRIE SAGE
+	MODESTO ASH	⊗	SHADSCALE
⊙	KENTUCKY COFFEE TREE	⊙	BLUE MIST
⊙	EASTERN REDBUD	⊙	MOUNTAIN MAHOGANY
⊙	LONDON PLANE TREE	⊙	CHAMISA
⊙	ARIZONA SYCAMORE	⊙	APACHE PLUME
⊙	AUSTRIAN PINE	⊙	WESTERN SAND CHERRY
⊙	JAPANESE PAGODA TREE	⊙	THREE LEAF SUMAC
⊙	CHANTICLEER PEAR	⊙	COYOTE WILLOW
⊙	BRADFORD PEAR	⊙	SOAP WEED
		⊙	BEAR BERRY COTONEASTER
		⊙	BEARGRASS
		⊙	WINTER JASMINE
		⊙	PRICKLY PEAR CACTUS
		⊙	'BOWLES' MAUVE' WALLFLOWER
		⊙	MEXICAN EVENING PRIMROSE
		⊙	IRENE ROSEMARY

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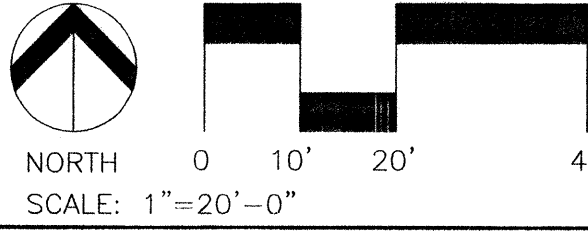
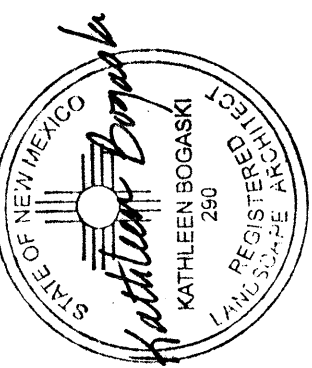
CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

TITLE: PROJECT: KOREAN WAR VETERANS PARK
SHEET: PLANTING PLAN-NORTH AREA


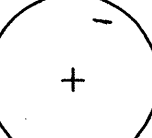
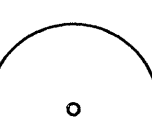
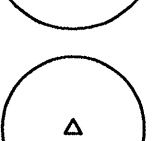
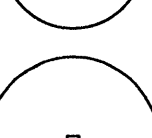
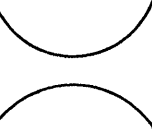

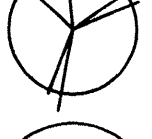

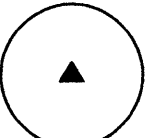
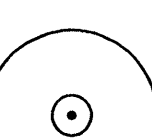

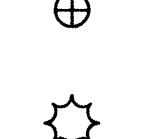
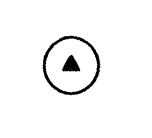
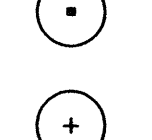
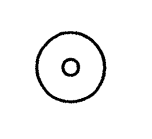
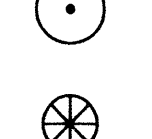

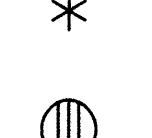
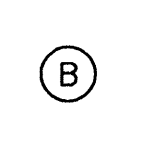
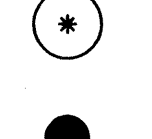



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City Project No. 5020.92
Zone Map No. L-16-Z




AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		LANDSCAPE ARCHITECT'S SEAL		REVISIONS		DESIGNED BY		DRAWN BY		CHECKED BY	
CONTRACTOR	WORK ORDER NO.	PROJECT BENCHMARK	DATE	NO.	BY	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
		CITY OF ALBUQUERQUE BENCHMARK 7-L15, A 3 1/4 ALUMINUM CAP SET IN DRILL HOLE, FLUSH WITH THE TOP CURB. STATIONED IS STAMPED "ACS, 7-L15, 1984". LOCATED 56.2' NORTHWEST OF YALE BLVD. AND KATHRYN AVE.	8/95	1	COA					ASM	4-99	WET	4-99	WSP	5-99
MICRO-FILM INFORMATION		ELEVATION = 5161.47' (M.S.L.D.)													
RECORDED BY		T.B.M. = TOP OF STORM DRAIN MANHOLE RIM.													
NO.		ELEVATION = 5165.43 (M.S.L.D.)													



PLANTING SCHEDULE

SYM	APPROX. QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	COND	NOTES
TREES						
	15	CHILOPSIS LINEARIS	DESERT WILLOW	—	25 GALLON	MINIMUM 3 STEMS
	28	FRAXINUS VELUTINA	MODESTO ASH	2 1/4" CAL	B&B	STRONG CENTRAL LEADER SYMMETRICAL FORM
	1	GYMNOCLADUS DIOICA	KENTUCKY COFFEE TREE	2 1/2" CAL	B&B	STRONG CENTRAL LEADER SYMMETRICAL FORM
	14	CERCIS CANADENSIS	EASTERN REDBUD	2" CAL	B&B	STRONG CENTRAL LEADER SYMMETRICAL FORM
	13	PLATANUS ACERIFOLIA	LONDON PLANE TREE	2 1/4" CAL	B&B	STRONG CENTRAL LEADER SYMMETRICAL FORM
	5	PLATANUS WRIGHTII	ARIZONA SYCAMORE	2 1/2" CAL	B&B	STRONG CENTRAL LEADER SYMMETRICAL FORM
	7	PINUS NIGRA	AUSTRIAN PINE	8'	B&B	FULL BRANCHING TO THE GROUND
	10	SOPHORA JAPONICA	JAPANESE PAGODA TREE	2 1/4" CAL	B&B	STRONG CENTRAL LEADER SYMMETRICAL FORM
	4	PYRUS CALLERYANA 'CHANTICLEER'	CHANTICLEER PEAR	2 1/2" CAL	B&B	MATCHING SYMMETRICAL FORM
	1	PYRUS CALLERYANA	BRADFORD PEAR	2" CAL.	B&B	STRONG CENTRAL LEADER SYMMETRICAL FORM
SHRUBS						
	86	ARTEMESIA LUDOVICIANA	PRAIRIE SAGE	1 GAL	CONTAINER	MINIMUM SPACING 3' O.C.
	18	ATRIPLEX CONFERTIFOLIA	SHADSCALE	5 GAL	CONTAINER	MINIMUM SPACING 3' O.C.
	60	CARYOPTERIS CLANDONENSIS	BLUE MIST	5 GAL	CONTAINER	MINIMUM SPACING 4' O.C.
	8	CERCOCARPUS MONTANUS	MOUNTAIN MAHOGANY	5 GAL	CONTAINER	MINIMUM SPACING 8' O.C.
	78	CHRYSOETHAMNUS NAUSEOUSUS	CHAMISA	5 GAL	CONTAINER	MINIMUM SPACING 5' O.C.
	64	FALLUGIA PARADOXA	APACHE PLUME	5 GAL	CONTAINER	MINIMUM SPACING 4' O.C.
	16	PRUNUS BESSEYI	WESTERN SAND CHERRY	5 GAL	CONTAINER	MINIMUM SPACING 6' O.C.
	77	RHUS TRILOBATA	THREE LEAF	5 GAL	CONTAINER	MINIMUM SPACING 5' O.C.
	25	SALIX EXIGUA	COYOTE WILLOW	5 GAL	CONTAINER	MINIMUM SPACING 5' O.C.
	* 96	EXISTING YUCCA GLAUCA TO BE TRANSPLANTED	SOAP WEED	VARIES	TO BE MAINTAINED BY CONTRACTOR	MINIMUM SPACING 3' O.C.
	14	COTONEASTER DAMMERI 'CORAL BEAUTY'	BEAR BERRY COTONEASTER	5 GAL	CONTAINER	MINIMUM SPACING 4' O.C.
	3	NOLINA TEXANA	BEARGRASS	1 GAL	CONTAINER	MINIMUM SPACING 5' O.C.
	15	JASMINUM NUDIFORUM	WINTER JASMINE	5 GAL	CONTAINER	MINIMUM SPACING 5' O.C.
	* 31	EXISTING PRICKLY PEAR CACTUS TO BE TRANSPLANTED	—	VARIES	TO BE MAINTAINED BY CONTRACTOR	MINIMUM SPACING 3' O.C.

* CONTRACTOR TO SUPPLY THE BALANCE OF PLANTS @ 1 GALLON SIZE IF EXISTING QUANTITIES FROM THE SITE ARE INSUFFICIENT.

PERENNIALS						
	10	CHEIRANTHUS SYN. ERYSIMUM LINIFOLIUM	'BOWLES MAUVE' WALLFLOWER	1 GAL	CONTAINER	MINIMUM SPACING 4' O.C.
	8	OENOTHERA BERLANDIERA	MEXICAN EVENING PRIMROSE	1 GAL	CONTAINER	MINIMUM SPACING 2' O.C.
	28	ROSMARINUS OFFICINALIS 'IRENE'	IRENE ROSEMARY	1 GAL	CONTAINER	MINIMUM SPACING 2' O.C.


PLANTING NOTES:

- TURF GRASS SEED AND INSTALLATION TO BE PER C.O.A. STD SPECIFICATIONS.
- BUFFALO/BLUE GRAMMA NATIVE GRASS MIX SHALL BE
50% HACHITA BLUE GRAMMA
50% TEXOKA BUFFALO GRASS
SEEDING RATE TO BE 4LBS. P.L.S. PER 1000 S.F.
SEED BED PREPARATION TO BE PER C.O.A. STD. SPECIFICATIONS, SECTION 1011.
SEED APPLICATION AND MULCHING TO BE PER SECTION 1012.
- PERENNIAL/NATIVE GRASS MIX TO BE INSTALLED PER COA STD. SPECIFICATIONS, SECTION 1012.4.1.2.
PERENNIAL/NATIVE GRASS MIX TO BE:
BOUTELOUA GRACILIS/BUEGRAMMA 4LBS/2000SF
ORYZOPSIS HYMENOIDES/INDIAN RICE GRASS 2LBS/2000SF
ANDROPOGON HALLI/SAND BLUESTEM 1LB/2000SF
ARTEMESIA LUDOVICIANA/PRAIRIE SAGE 10Z./2000SF
LIATRUS PUNCTATA/GAYFEATHER 10Z./2000SF
BAILEYA MULTIRADIATA/DESERT MARIGOLD 40Z./2000SF
PENSTEMON AMBIGUA/BUSH PENSTEMON 20Z./2000SF
- AMENDED SOIL IS TO BE PLANTING SOIL AS SPECIFIED IN THE C.O.A. STD. SPECIFICATIONS MIXED WITH EXISTING SOIL FROM THE EXCAVATION OF THE PLANTING PIT. MIX 1 PART PLANTING MIX TO 2 PARTS EXISTING SOIL FOR BACKFILL.
- ALL DISTURBED AREAS NOT OTHERWISE SPECIFIED TO BE SEEDED WITH NATIVE GRASS AS SPECIFIED PER COA STD. SPECIFICATIONS SECTION 1012.4.1.2.
- SEEDING TIMES

ALBUQUERQUE BLEND TURF GRASS SHALL BE SEEDED AS PER COA STANDARD SPECIFICATIONS. SEEDING MAY ONLY OCCUR FROM APRIL 1ST THROUGH MAY 30TH OR AUGUST 15TH THROUGH SEPTEMBER 30TH.

BUFFALO/BLUE GRAMMA NATIVE GRASS MIX ARE TO BE INSTALLED PER COA STANDARD SPECIFICATIONS. SEEDING MAY ONLY OCCUR FROM JUNE 15TH THROUGH AUGUST 15TH. WEED ABATEMENT PROCEDURES MUST BE FOLLOWED BEFORE SEEDING SHALL OCCUR.

WEED ABATEMENT PROCEDURE IS AS FOLLOWS:
THE AREA TO BE SEEDED WITH NATIVE GRASSES IS TO BE PREPARED FOR SEEDING AS PER COA STANDARD SPECIFICATIONS. THE IRRIGATION SYSTEM MUST BE IN PLACE AND THE AREA IS TO BE IRRIGATED DAILY FOR A PERIOD OF 2 WEEKS. THE AMOUNT OF DAILY IRRIGATION TIME WILL BE DETERMINED BY THE AMOUNT NECESSARY TO KEEP THE TOP INCH OF SOIL MOIST UNTIL THE NEXT WATERING. AFTER THE TWO WEEK IRRIGATION PERIOD, ALL SPROUTED WEEDS ARE TO BE TREATED WITH ROUND UP OR OTHER APPROVED PRODUCT. THE CONTRACTOR WILL THEN WAIT 2 WEEKS AND NO LONGER AND PROCEED WITH SEEDING OPERATIONS.

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CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

TITLE: PROJECT: KOREAN WAR VETERANS PARK
SHEET: PLANT LEGEND/DETAILS

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APPROVED
AUG 13 1999
DESIGN REVIEW COMMITTEE

APPROVED
AUG 13 1999
CITY ENGINEER

ANDERSON
AVE. S.E.

YALE BLVD. S.E.

YALE BLVD. S.E.

(TYP. OF 12)

LOMA LINDA COMMUNITY CENTER

LIMIT OF WORK

LIMIT OF WORK

KEYED NOTES

1. REFER TO SHEET L4 FOR EXACT LOCATION AND DIMENSIONS FOR POLE LIGHTS IN PARKING AREA. REFER TO SHEETS L1, L2 AND L3 FOR EXACT LOCATION AND DIMENSIONS FOR ALL REMAINING POLE LIGHTS.
2. EXTEND CIRCUIT(S) INDICATED THROUGH EXTERIOR LIGHTING CONTACTOR IN SKIRTS OF EXISTING PANEL "M" PER KEYED NOTE #6. CONDUITS SHALL BE MINIMUM SIZE 1" WITH #8 THWN CONDUCTORS THROUGHOUT. SIZE CONDUITS FOR CONDUIT FILL PER NEC.
3. WEATHERPROOF, 30 AMP, 2 POLE, 4 WIRE, 120/208 VOLT RECEPTACLE. INSTALL ON EXISTING POLE BASE. RECEPTACLE SHALL HAVE A LOCKABLE HINGED COVER OR BE INSTALLED IN A WEATHERPROOF LOCKABLE BOX.
4. EXTEND 1" CONDUIT WITH 4-#6 THWN TO CIRCUIT INDICATED IN PANEL PER KEYED NOTE #6. PROVIDE A FLUSH WITH GRADE PULL BOX EVERY 250'. PULL BOX SHALL BE QUAZITE #PC0608DG06 WITH COVER #PC0608CG00. PROVIDE TRAFFIC RATED COVER IN AREAS SUBJECT TO VEHICULAR TRAFFIC. LOGO ON COVER SHALL READ "ELECTRIC". PROVIDE COVERS WITH LOCKS OR TAMPER-PROOF BOLTS. COORDINATE EXACT LOCATION OF PULL BOXES WITH ARCHITECT PRIOR TO ROUGH-IN. DO NOT INSTALL IN CHILDREN'S PLAY AREAS.
5. EXISTING POLE LIGHT FIXTURES TO REMAIN. INSTALL NEW 150 WATT, HPS LAMP. REMOVE EXISTING EXPANDED METAL LENSE GUARD AND INSTALL NEW POLYCARBONATE VANDAL SHIELD.
6. EXISTING PANEL "M". INSTALL NEW CIRCUIT BREAKERS IN SPACES INDICATED ON CONDUIT HOMERUN DESIGNATIONS. INSTALL NEW LIGHTING CONTACTOR AND TIME CLOCK IN SKIRTS OF PANEL FOR CONTROL OF NEW EXTERIOR LIGHTING. SEE ENLARGED PLAN ON SHEET E-2 FOR ADDITIONAL INFORMATION. ROUTE NEW CONDUITS FROM EXTERIOR LIGHT FIXTURES, RECEPTACLES, PUMPS, ETC., THROUGH EXISTING TRENCH UP TO PANEL. FIELD VERIFY EXISTING CONDITIONS.
7. WEATHERPROOF, GFI DUPLEX RECEPTACLE. RECEPTACLE SHALL HAVE A LOCKABLE HINGED COVER OR BE INSTALLED IN A WEATHERPROOF LOCKABLE BOX. COORDINATE EXACT LOCATION WITH THE ARCHITECT.
8. REMOVE EXISTING POLE LIGHT FIXTURE AND ASSOCIATED CONDUCTORS FROM UNDERGROUND CONDUIT TO NEAREST REMAINING LIGHT FIXTURE. RE-USE EXISTING FIXTURE IN NEW LOCATIONS PER NOTE #9. INSTALL NEW 150 WATT, HPS LAMP. REMOVE EXISTING EXPANDED METAL LENSE GUARD AND INSTALL NEW POLYCARBONATE VANDAL SHIELD.
9. NEW LOCATION OF EXISTING POLE LIGHT FIXTURE PER NOTE #8. PROVIDE NEW ANCHOR BOLTS PER EXISTING BOLT PATTERN OF POLE BASE.
10. STUB A 1" CONDUIT PAST CONCRETE WALK FOR FUTURE LIGHTING. CAP AND MARK CONDUIT FOR FUTURE REFERENCE.
11. INTERCEPT EXISTING CONDUIT AND REFEED EXISTING POLE LIGHTS PER NOTE #5.
12. EXISTING POLE LIGHT FIXTURES TO REMAIN.
13. EXISTING PAD MOUNT TRANSFORMER AND SERVICE EQUIPMENT TO REMAIN.
14. COMBINATION DISCONNECT SWITCH/MAGNETIC MOTOR STARTER, 30 AMP, 3 POLE + SN, 250 VOLT, FUSIBLE, SIZE 1, 120 VOLT COIL, NEMA 4X ENCLOSURE. FUSE AT 125% MOTOR FLA WITH BUSSMANN FPN-FUSES. MAKE CONNECTION TO IRRIGATION BOOSTER PUMP AS REQUIRED. EXTEND 3/4" CONDUIT WITH 5-#10 THWN NEW 20 AMP, 3 POLE CIRCUIT BREAKER IN SPACES INDICATED AT EXISTING PANEL "M".
15. 3/4" CONDUIT WITH CONTROL CONDUCTORS INDICATED. CONNECT TO EXISTING IRRIGATION CONTROLLER. COORDINATE WITH LANDSCAPE CONTRACTOR.
16. EXISTING IRRIGATION CONTROLLER.



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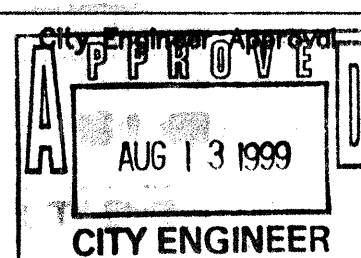
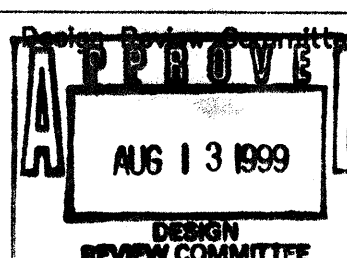
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CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

TITLE: PROJECT: KOREAN WAR VETERANS PARK
ELECTRICAL SITE PLAN



Last Design Update

Ms./Day/Yr.	Ms./Day/Yr.



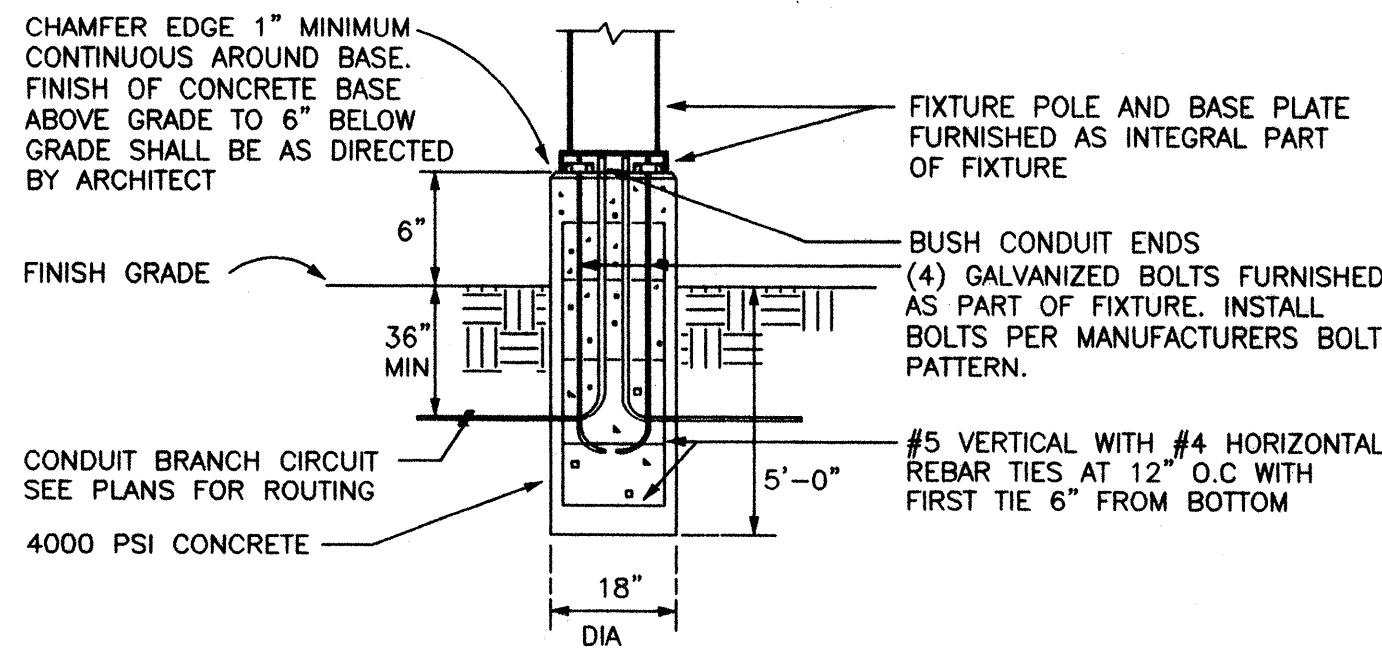
NORTH
SCALE: 1"=40'-0"

City Project No.

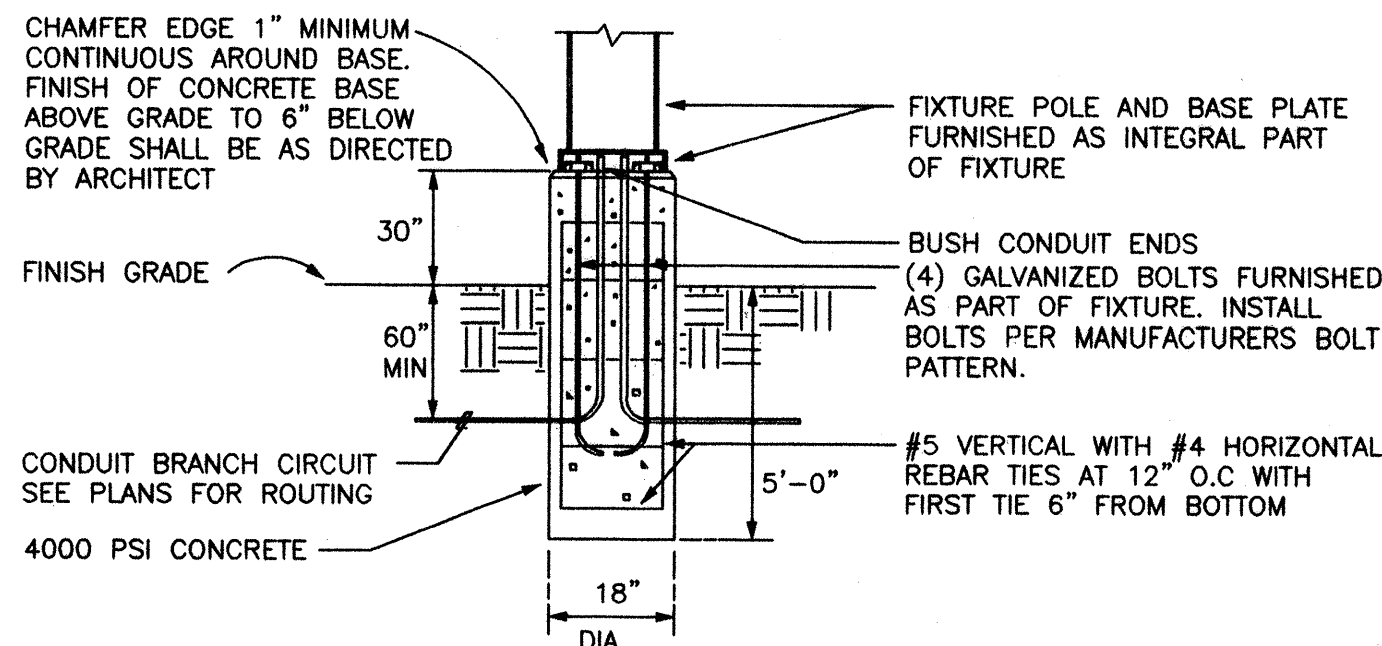
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Zone Map No.
L-16-Z

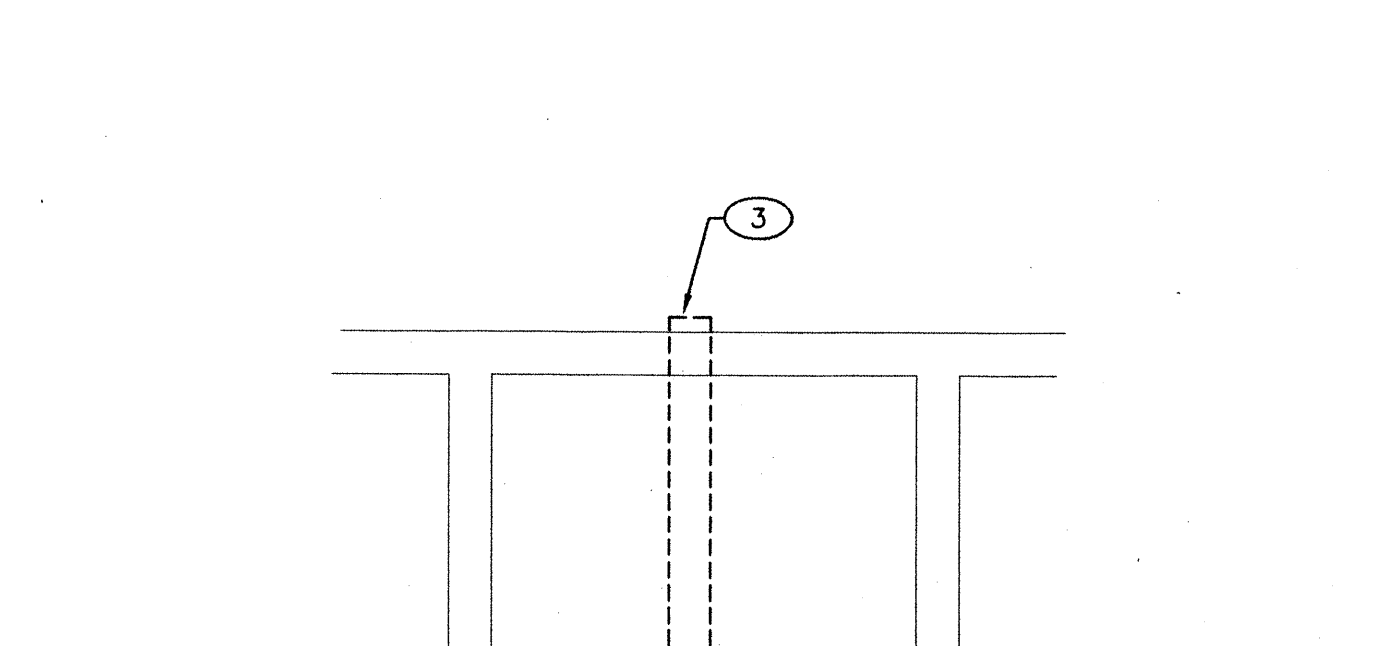
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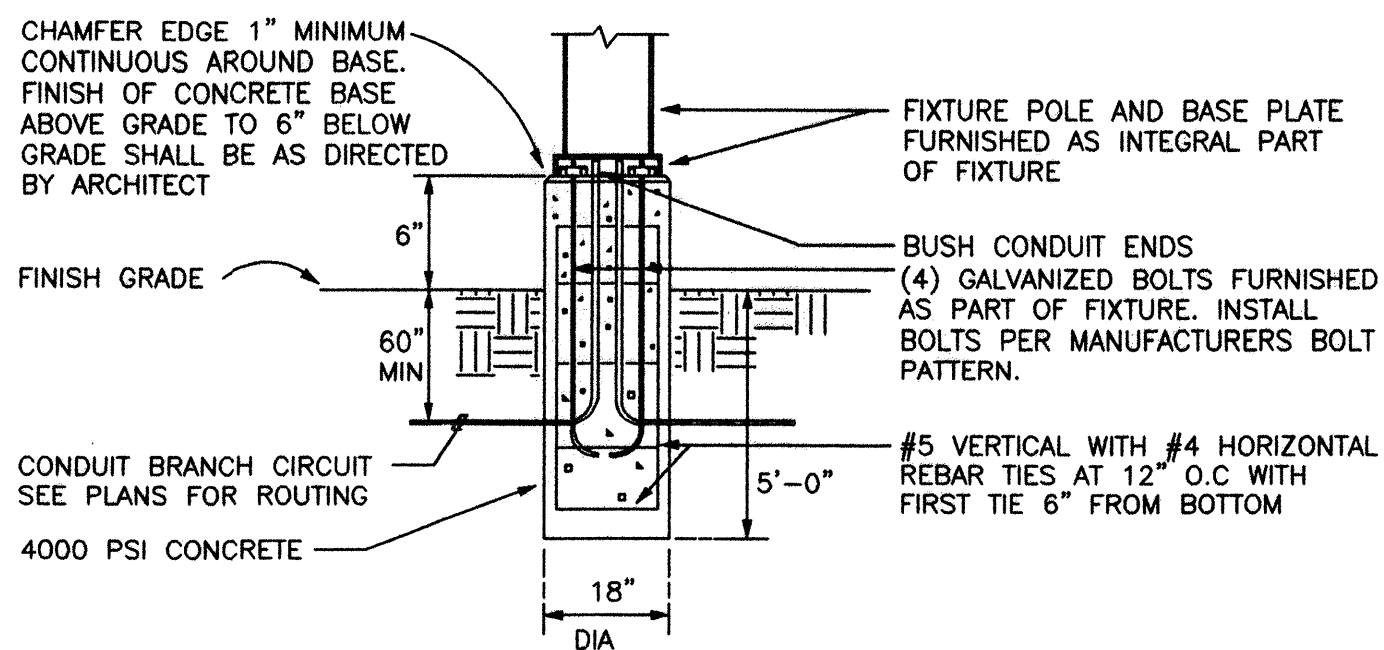
POLE BASE "A"



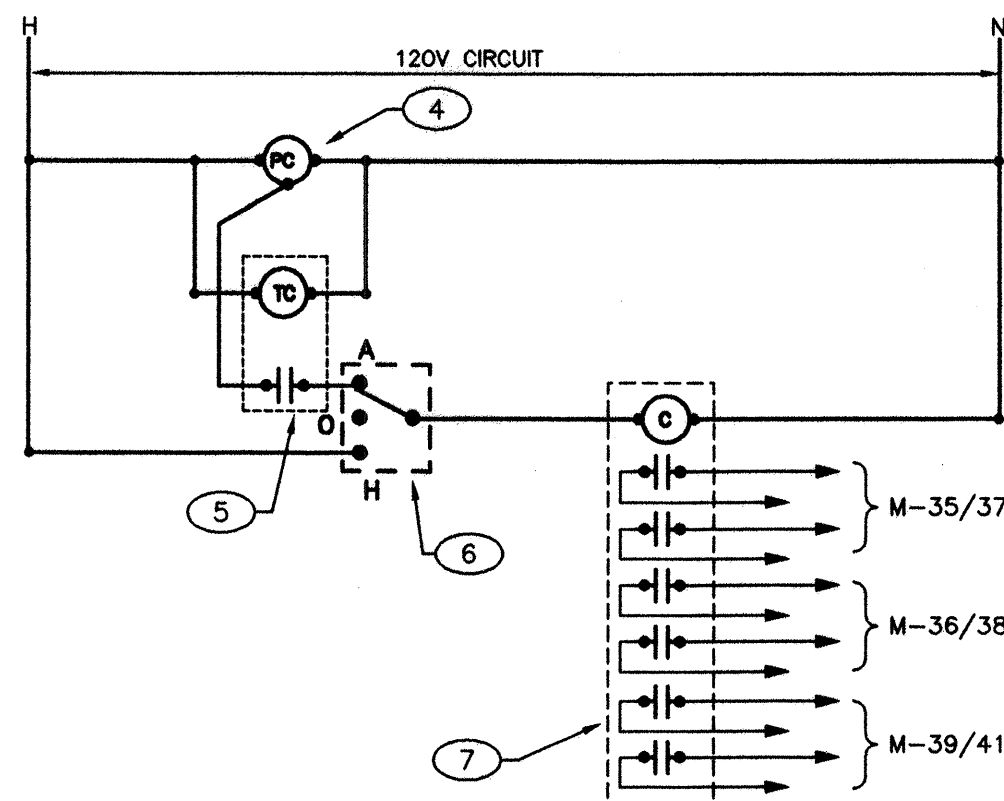
POLE BASE "B"



POLE BASE "C"



POLE BASE "B"



EXTERIOR LIGHTING CONTROL DIAGRAM

ENLARGED ELECTRICAL ROOM PLAN
SCALE: 1/2"=1'-0"

GENERAL NOTES

- ANY QUESTION ARISING DURING THE BID PERIOD IN REGARD TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE ENGINEER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
- LOCATION OF EQUIPMENT, CONDUIT, AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH THE ARCHITECTURAL AND LANDSCAPE DRAWINGS AND FIELD CONDITIONS PRIOR TO ROUGH-IN.
- ALL WIRING SHALL BE ROUTED IN CONDUIT AND SHALL BE CONCEALED WHENEVER POSSIBLE, UNLESS OTHERWISE INDICATED.
- THE CONDUIT RUNS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXACT LOCATION AND ROUTING SHALL BE PER ACTUAL FIELD CONDITIONS.
- PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC. ALL WIRES SHALL BE TAGGED AT PULL BOXES AND JUNCTION BOXES WITH APPROVED PLASTIC TAGS.
- ALL CONDUIT SHALL BE PVC SCHEDULE 40 FOR UNDERGROUND RUNS. ALL BENDS AND CONDUITS ABOVE GRADE SHALL BE GALVANIZED RIGID STEEL. PVC COATED OR PIPE TAPE WRAPPED RIGID STEEL CONDUIT SHALL BE UTILIZED WHEN IN CONTACT WITH THE EARTH.
- EACH CONDUIT TERMINATION SHALL BE PROVIDED WITH A PLASTIC INSULATED BUSHING - NO EXCEPTIONS.
- ALL WIRE SHALL BE TYPE THHN/THWN, SOLID, ANNEALED COPPER UP TO SIZE #10 AWG (#8 AND LARGER SHALL BE CONCENTRIC STRANDED) 75 DEGREE C, (167 DEGREES F), 98% CONDUCTIVITY, MINIMUM #12.
- ALL WIRES SHALL BE TAGGED AT ALL PULL BOXES, J-BOXES, EQUIPMENT BOXES AND CABINETS WITH APPROVED PLASTIC TAGS, ACTION CRAFT, BRADY, OR APPROVED EQUAL.
- ALL NEW MATERIAL SHALL HAVE AN U.L. LABEL.
- ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN NOT HAND WRITTEN. SPECIFIC CIRCUIT INFORMATION SHALL BE INDICATED ON THE DIRECTORIES PER NEC.
- INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULLBOXES.
- THIS CONTRACTOR SHALL PREPARE AS-BUILT DRAWINGS DOCUMENTING ANY AND ALL WIRING AND EQUIPMENT CONDITIONS AND CHANGES WHILE COMPLETING THIS CONTRACT. SUBMIT AT SUBSTANTIAL COMPLETION.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF NEW MEXICO STATE ELECTRICAL CODE AND THE NATIONAL ELECTRICAL CODE, 1999 EDITION, NO EXCEPTIONS. THE ELECTRICAL DRAWINGS ARE DIAGRAMATIC ONLY. CONFLICTS OR OMISSIONS ON THE DRAWINGS DO NOT RELIEVE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY OF COMPLYING WITH CODE REQUIREMENTS.

KEYED NOTES

- EXISTING PANEL "M". PROVIDE AND INSTALL THE FOLLOWING NEW CIRCUIT BREAKERS:
ONE (1), 20 AMP, 1 POLE CIRCUIT BREAKER FOR RECEPTACLE IN SPACE #27.
THREE (3), 20 AMP, 2 POLE CIRCUIT BREAKERS FOR NEW POLE LIGHTS IN SPACES #35, 36, 37, 38, 39, 41.
ONE (1), 30 AMP, 2 POLE CIRCUIT BREAKER FOR 30 AMP RECEPTACLE AT BASKETBALL COURT IN SPACES #40 AND #42.
ONE (1), 20 AMP, 3 POLE CIRCUIT BREAKER FOR 3 HP BOOSTER PUMP IN SPACES #29, 31 AND 33.
- EXISTING TRENCH FOR CONDUIT ACCESS FROM EXTERIOR. FIELD VERIFY. INSTALL NEW CONDUITS FROM EXTERIOR TO PANELBOARD.
- EXTEND NEW CONDUITS TO THIS LOCATION AND THROUGH TRENCH PER NOTE #2.
- PHOTOCELL, INTERMATIC #K4133. MOUNT 12" ABOVE EXISTING ROOF. PROVIDE PITCH PAN AT ROOF PENETRATION. PITCH PAN SHALL BE INSTALLED BY A QUALIFIED ROOFING CONTRACTOR.
- TIME CLOCK, INTERMATIC #ET100C. MOUNT IN TOP SKIRTS OF EXISTING PANEL "M".
- HAND-OFF-AUTOMATIC SELECTOR SWITCH OUTLET BOX ADJACENT PANEL "M". PROVIDE ENGRAVED MICARTA NAMEPLATE INDICATING FUNCTION OF SWITCH.
- LIGHTING CONTACTOR, ELECTRICALLY HELD, 20 AMP, 6 POLE, 120 VOLT COIL, MOUNT IN TOP SKIRT OF PANEL "M".

LOAD SUMMARY 120/208 VOLT, 3 PHASE, 4 WIRE

LOAD	CONNECTED KVA	DEMAND KVA
EXISTING	60 KVA	75 KVA*
NEW EXTERIOR LIGHTS	11 KVA	13 KVA
NEW BOOSTER PUMP	4 KVA	4 KVA
TOTAL	75 KVA	92 KVA

* PNM ESTIMATED HIGH DEMAND X 125 % PER NEC ARTICLE #220-35. EXISTING SERVICE IS SIZED AT 400 AMPS WITH A LOAD OF 75 KVA/208 AMPS. AVAILABLE CAPACITY = 192 AMPS. 17 KVA/47 AMPS WILL BE ADDED.

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
○ ○	CEILING OR WALL BRACKET FIXTURE. SEE FIXTURE SCHEDULE.
● □	POLE MOUNTED FIXTURE. SEE FIXTURE SCHEDULE.
⊕	DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE, UP +18" UNLESS OTHERWISE INDICATED
⊖	DISCONNECT SWITCH. SIZE AND POLES FOR LOAD CONNECTED.NEMA 3R
⊕ ⊖	BRANCH CIRCUIT IN WALLS OR CEILING WITH CONDUCTORS INDICATED. IE; NEUTRAL, HOT(PHASE), SWITCH LEG/TRAVLER, GROUND RESPECTIVELY
⊕ ⊖	BRANCH CIRCUIT IN WALLS OR UNDER FLOOR. CONDUCTORS INDICATED. IE; NEUTRAL, HOT(PHASE), SWITCH LEG/TRAVLER, GROUND RESPECTIVELY
⊕ ⊖	HOME RUN TO PANEL, WITH BRANCH CIRCUIT NUMBERS INDICATED. IE; NEUTRAL, HOT(PHASE), SWITCH LEG/TRAVLER, GROUND RESPECTIVELY



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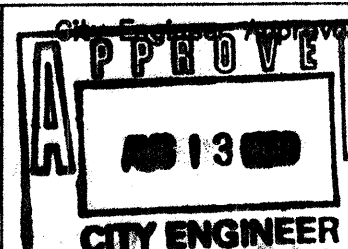
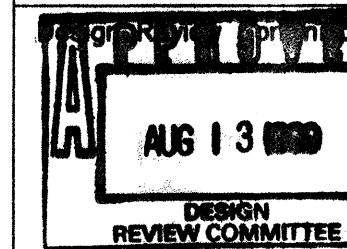
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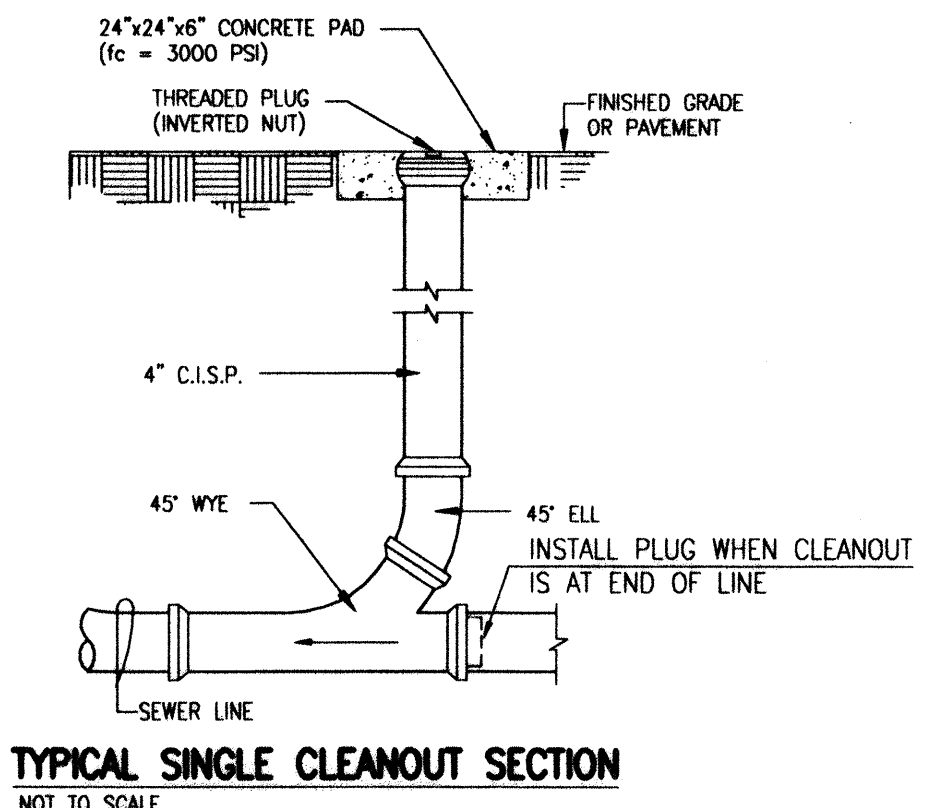
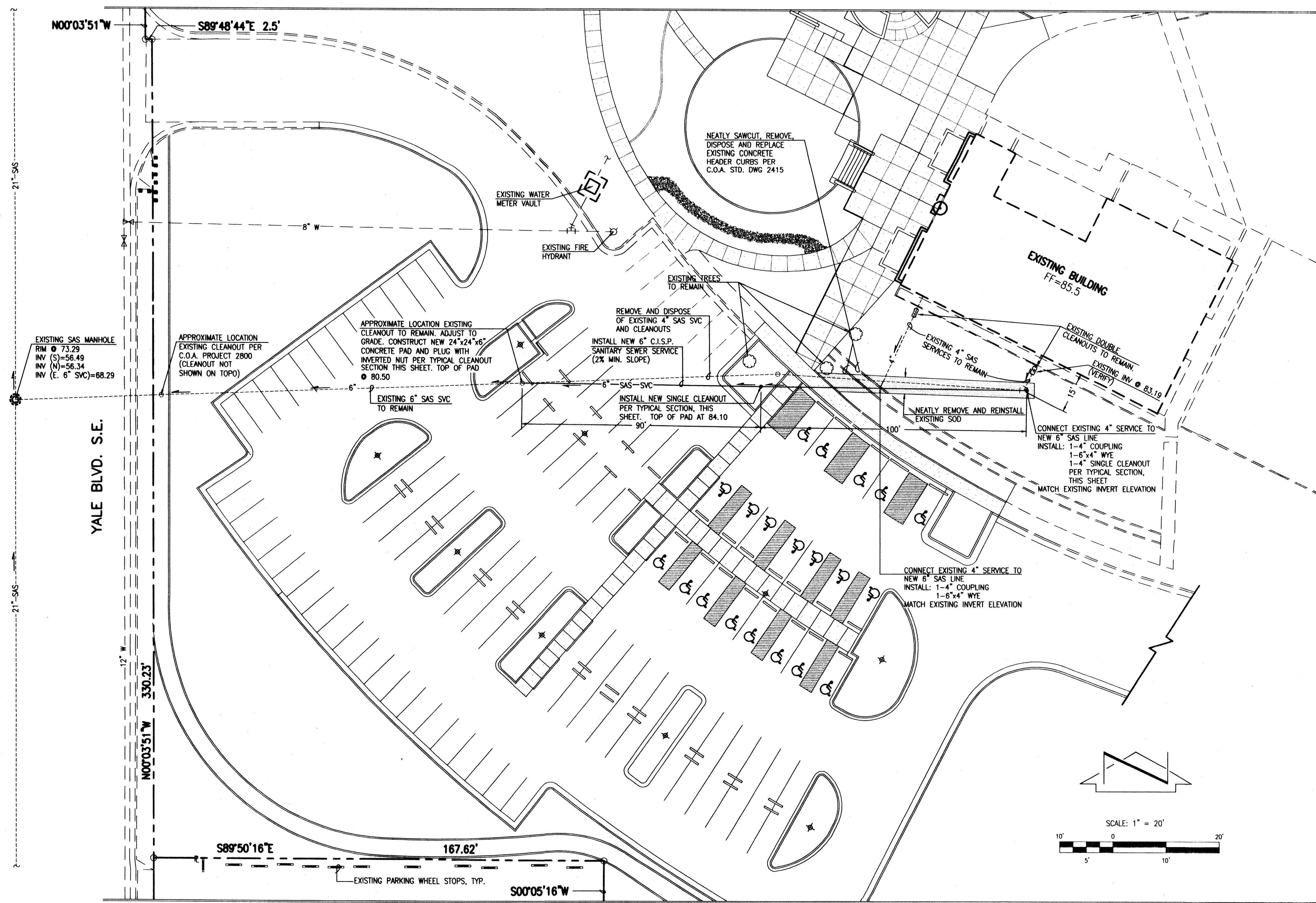
CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

TITLE: PROJECT: KOREAN WAR VETERANS PARK
ELECTRICAL DETAILS, LEGEND, SCHEDULES



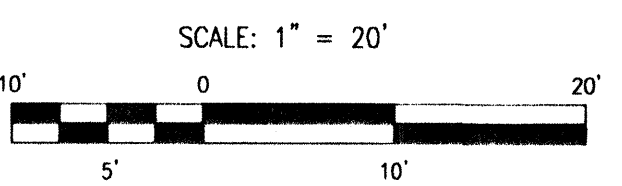
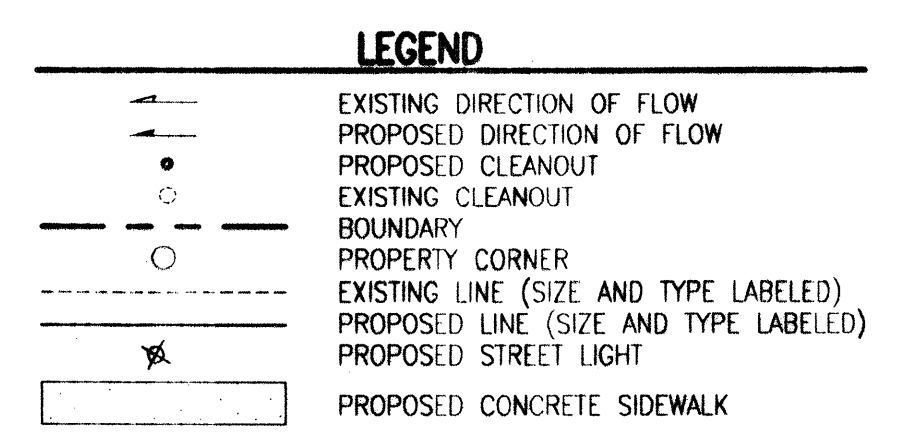
City Project No. 5020.92 Zone Map No. 16-Z

Sheet E2 Of



NOTE: EXISTING UTILITY INFORMATION SHOWN HEREON IS TAKEN FROM CITY OF ALBUQUERQUE TOPOGRAPHIC SURVEYS DATED 08/95 AND 07/97, SUPPLEMENTED WITH INFORMATION FROM THE UTILITY SITE PLAN FOR LOMA LINDA COMMUNITY CENTER DATED 10/15/88 BY CHERRY SEE AND ASSOCIATES. CONTRACTOR SHALL REFER TO NOTES 3 AND 4 OF THIS SHEET FOR ADDITIONAL INFO CONCERNING THE EXISTING UTILITIES. BOUNDARY INFORMATION SHOWN HEREON IS FROM PLAT OF RECORD 96C-345.

- GENERAL NOTES:
1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION - LATEST UPDATE.
 2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 260-1990, (ALBUQUERQUE AREA) FOR LOCATION OF EXISTING UTILITIES.
 3. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY 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.
 4. SHOULD A CONFLICT EXIST BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY FOR ALL PARTIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
 5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION.
 6. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING SAFETY AND HEALTH.
 7. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
 8. 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.
 9. A DISPOSAL SITE FOR ALL EXCESS EXCAVATION MATERIAL (CONTAMINATED OR OTHERWISE), ASPHALTIC PAVING, CONCRETE PAVING, ETC. SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND IN HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT SHALL BE MADE.
 10. A BORROW SITE FOR IMPORT MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A BORROW SITE AND IN HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT SHALL BE MADE.
 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFELY OBTAINING THE REQUIRED COMPACTION. THE CONTRACTOR SHALL SELECT AND USE METHODS WHICH SHALL NOT BE INJURIOUS OR DAMAGING TO THE EXISTING FACILITIES AND STRUCTURES WHICH SURROUND THE WORK AREAS.
 12. THE CONTRACTOR SHALL CONFINE HIS WORK WITHIN THE CONSTRUCTION LIMITS IN ORDER TO PRESERVE THE EXISTING IMPROVEMENTS AND SO AS NOT TO INTERFERE WITH THE OPERATIONS OF THE EXISTING FACILITIES.
 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE MEANS AND METHODS TO EXCAVATE AND TRENCH. THIS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, SUPPORTING AND REPLACING, IF DAMAGED, ALL OTHER UTILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO TRENCHING, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
 15. CAUTION: THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.



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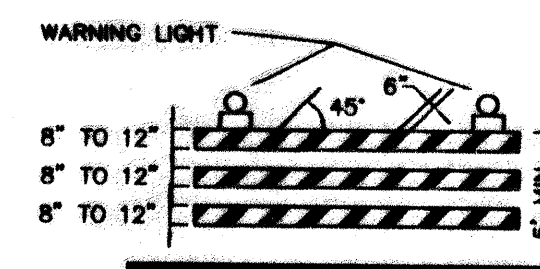
CITY OF ALBUQUERQUE CAPITAL IMPLEMENTATION PROGRAM	
TITLE: KOREAN WAR VETERANS PARK SANITARY SEWER SERVICE SITE PLAN	
Design Review Committee	City Engineer Approval
APPROVED	APPROVED
DATE: AUG 13 1999	DATE: AUG 13 1999
CITY ENGINEER	

CONSTRUCTION TRAFFIC CONTROL GENERAL NOTES

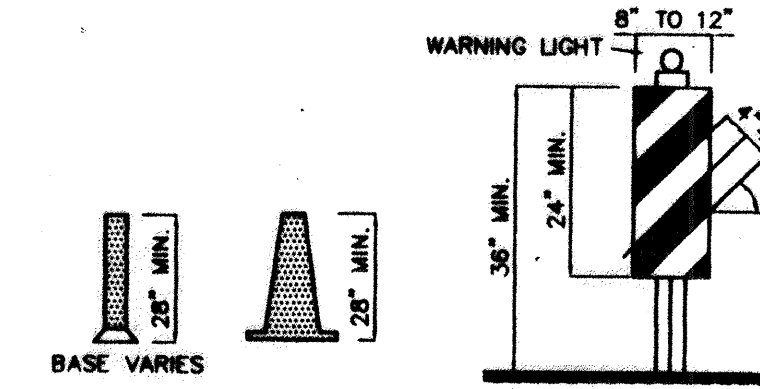
- CONTRACTOR MUST OBTAIN FROM CONSTRUCTION COORDINATION AN EXCAVATION/BARRICADING PERMIT BEFORE ENGAGING IN ANY CONSTRUCTION, MAINTENANCE OR REPAIR WORK IN ANY OF THE CITY OF ALBUQUERQUE'S RIGHTS-OF-WAY. EMERGENCY WORK THAT WOULD PRESERVE LIFE OR PROPERTY IS EXCLUDED WITH THE UNDERSTANDING, THAT A PERMIT SHALL BE OBTAINED WITHIN 24 TO 48 HOURS.
- CONTRACTOR SHALL AT THE TIME OF PERMIT REQUEST, SUBMIT FOR APPROVAL BY CONSTRUCTION COORDINATION, A TRAFFIC CONTROL PLAN DETAILING ALL EXISTING TOPOGRAPHY SUCH AS LANE WIDTHS, DRIVEWAYS, AND BUSINESS/RESIDENTIAL ACCESSES. THE TRAFFIC CONTROL PLAN SHALL INCLUDE ALL PHASES OF WORK AND SCHEDULES INVOLVED IN THE CONSTRUCTION PROJECT. ANY SEPARATE PHASES OF A CONSTRUCTION PROJECT SHALL BE GIVEN AN INDIVIDUAL PERMIT EACH. BLANKET PERMITS WILL NOT BE ISSUED.
- THESE TYPICAL TRAFFIC CONTROL PLANS DO NOT REFLECT THE EXISTING TOPOGRAPHY SUCH AS DRIVEWAYS, LANE WIDTHS, AND BUSINESS/RESIDENTIAL ACCESSES. EVERY LOCATION THAT REQUIRES CONSTRUCTION TRAFFIC CONTROL SHALL HAVE A DETAILED TRAFFIC CONTROL PLAN SHOWING ALL EXISTING TOPOGRAPHY.
- CONSTRUCTION SHALL NOT BEGIN UNLESS A TRAFFIC CONTROL PLAN HAS BEEN APPROVED AND VERIFIED BY CONSTRUCTION COORDINATION.
- CONSTRUCTION COORDINATION SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY TRAFFIC CONTROL CHANGES NEEDED BY CONTRACTOR, THAT WERE NOT PREVIOUSLY APPROVED. THESE TRAFFIC CONTROL CHANGES SHALL BE REQUESTED IN WRITING ACCOMPANIED WITH A TRAFFIC CONTROL PLAN REFLECTING SUCH CHANGES.
- ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL COMPLY TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL, SERVICE AND MAINTAIN ALL TRAFFIC CONTROL DEVICES. TRAFFIC CONTROL DEVICES SHALL NOT BE REMOVED OR ALTERED IN ANY WAY WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION, PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.
- THE CONSTRUCTION TRAFFIC CONTROL INITIAL SET-UP SHALL BE BY AN AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED WORKSITE TRAFFIC SUPERVISOR. THE MAINTENANCE AND SERVICING SHALL ALSO BE DONE BY AN ATSSA CERTIFIED WORKSITE TRAFFIC SUPERVISOR OR EQUIVALENT.
- CONTRACTOR IS RESPONSIBLE TO MAINTAIN AND SERVICE ALL TRAFFIC CONTROL DEVICES 24 HOURS A DAY, 7 DAYS A WEEK THROUGHOUT LENGTH OF PROJECT. CONTRACTOR IS RESPONSIBLE THAT ALL TRAFFIC CONTROL DEVICES COMPLY WITH THE MUTCD, LATEST EDITION.
- ALL ADVANCE WARNING SIGNS SHALL BE DOUBLE INDICATED WHENEVER THERE ARE MULTI-LANE TRAFFIC IN ANY ONE GIVEN DIRECTION AND THERE IS SUFFICIENT MEDIAN SPACE.
- ALL BARRICADES IN ALL TAPERS AND TANGENTS SHALL BE PLACED APART, A DISTANCE MEASURED IN FEET, EQUAL TO THAT OF THE POSTED SPEED LIMIT. NO EXCEPTIONS UNLESS APPROVED BY CONSTRUCTION COORDINATION PER MUTCD SECTION 6A-4.
- ALL WORK IN ARTERIAL ROADWAYS SHALL BE ON A CONTINUOUS 24-HOUR PER DAY BASIS UNTIL COMPLETED.
- CONTRACTOR IS RESPONSIBLE TO PROVIDE CONSTRUCTION COORDINATION, A WEEKLY LOG OF DAILY INSPECTIONS OF BARRICADE AND MAINTENANCE SCHEDULES ON PROJECTS THAT ARE OVER ONE WEEK DURATION.
- EQUIPMENT OR MATERIALS SHALL NOT BE STORED WITHIN 15 FEET OF A TRAVELLED TRAFFIC LANE DURING NON-WORKING HOURS WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND ADEQUATE MEANS OF CHANNELIZING PEDESTRIAN TRAFFIC AROUND AND THROUGH THE CONSTRUCTION AREA.
- CONTRACTOR IS RESPONSIBLE FOR OBLITERATION OF ANY CONFLICTING STRIPING AND RESPONSIBLE FOR ALL TEMPORARY STRIPING.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FACILITIES, BUSINESSES AND/OR RESIDENTS AT ALL TIMES.
- CONTRACTOR SHALL PROVIDE ACCESS SIGNS FOR BUSINESSES LOCATED WITHIN THE CONSTRUCTION AREA UNDER THE SUPERVISION OF CONSTRUCTION COORDINATION. EACH ACCESS SIGN SHALL HAVE 5 INCH, WHITE OPAQUE LETTERING ON BLUE REFLECTORIZED BACKGROUND. ACCESS SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE BID AND NOT PART OF THE CONTRACT UNLESS OTHERWISE STATED. NO MORE THAN 3 BUSINESSES SHALL BE LISTED ON A ACCESS SIGN. SHOPPING CENTERS AND MALLS SHALL BE LISTED AS SUCH.
- ALL ADVANCE WARNING SIGNS SHALL MEET THE MINIMUM REFLECTIVE INTENSITY REQUIREMENTS SET FORTH BY THE CITY OF ALBUQUERQUE. CONSTRUCTION COORDINATION SHALL DETERMINE ALL REQUIREMENTS AND APPROVE OR DISAPPROVE ANY ADVANCE WARNING SIGN PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.
- 48 HOURS PRIOR TO OCCUPYING OR CLOSING OF A RIGHT-OF-WAY, CONTRACTOR SHALL NOTIFY: POLICE, FIRE DEPARTMENT, SCHOOLS, HOSPITALS, TRANSIT AUTHORITY, BUSINESSES AND/OR RESIDENTS THAT WILL BE AFFECTED BY THE CONSTRUCTION.
- ANY FIELD ADJUSTMENTS SHALL BE APPROVED BY CONSTRUCTION COORDINATION.

- EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11 FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION. CONTRACTOR IS RESPONSIBLE FOR ANY WORK INVOLVED IN SATISFYING THESE REQUIREMENTS.
- CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE FOLLOWING:
 - STANDARDS AND REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
 - THE CITY OF ALBUQUERQUE TRAFFIC CODE, LATEST EDITION.
 - SECTION 19 OF THE CITY OF ALBUQUERQUE'S STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION, AS WELL AS OTHER SECTIONS.
- FAILURE TO COMPLY WITH ANY OF THE ABOVE MENTIONED, WILL BE ADEQUATE CAUSE TO CEASE ALL WORK ON ANY CONSTRUCTION PROJECT. WORK WILL NOT RESUME UNTIL ALL REQUIREMENTS ARE ADDRESSED AND APPROVED BY CONSTRUCTION COORDINATION.
- ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN NEW-CLEAN CONDITION. WASHING OF EQUIPMENT IS INCIDENTAL TO IT'S PLACEMENT AND MAINTENANCE.
- TRAFFIC CONTROL STANDARDS APPLY ONLY WHERE THE CONSTRUCTION TRAFFIC CONTROL PLANS ARE NOT SPECIFIC.

- ADVANCE WARNING SIGNS SHALL BE 36"x36" MIN. WITH SUPER ENGINEERING GRADE SHEETING OR BETTER. MOUNTING HEIGHT AT TOP OF SIGN SHALL BE THE SAME AS FOR A 48" SIGN AS INDICATED IN THE M.U.T.C.D.
- CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORKSITE. ALL GRAFFITI SHALL BE PROMPTLY REMOVED FROM ALL EQUIPMENT, BOTH PERMANENT AND TEMPORARY.



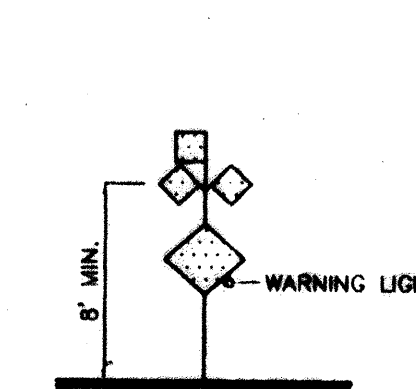
TYPE II BARRICADE



VERTICAL PANEL

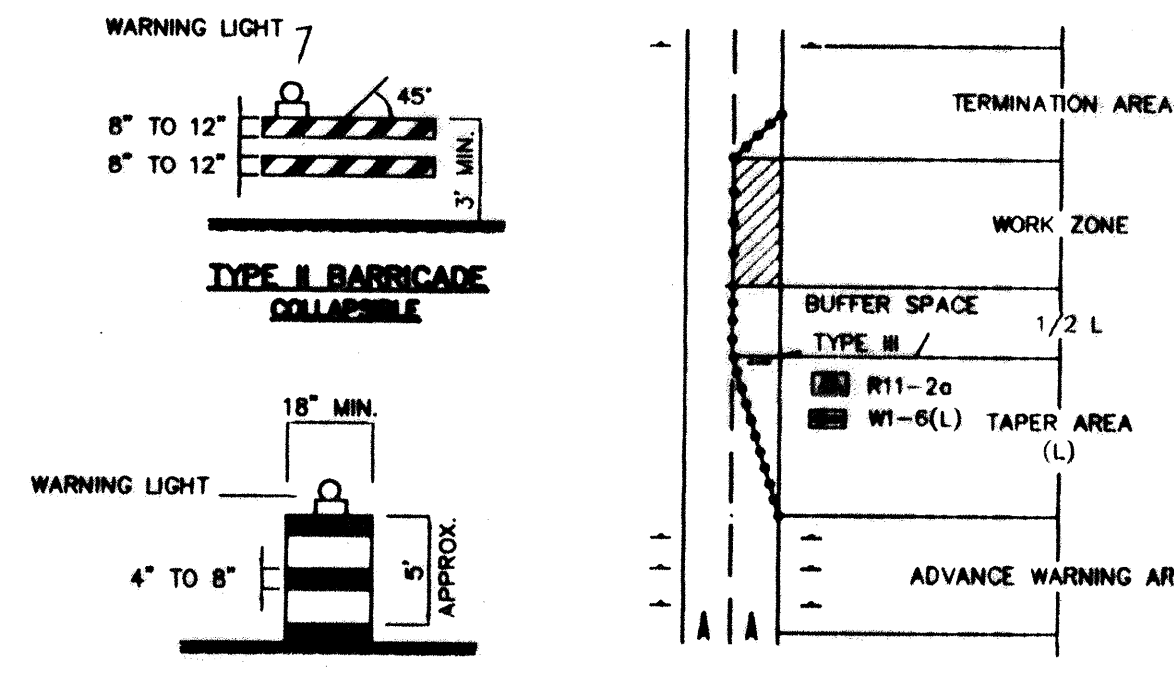


CONES



HIGH LEVEL WARNING DEVICE

- LEGEND**
- WORK AREA
 - BARRICADE - TYPE I, TYPE II, OR BARREL
 - BARRICADE - TYPE III
 - VERTICAL PANEL
 - WARNING SIGN
 - DISTANCE BETWEEN SIGNS - A DISTANCE MEASURED IN FEET EQUAL TO A VALUE OF TEN TIMES THE SPEED LIMIT OF THE STREET
 - FLAGMAN POSITION
 - SPACING BETWEEN BARRICADES - A DISTANCE MEASURED IN FEET EQUAL TO THE SPEED LIMIT OF THE STREET
 - TAPER LENGTH - SEE CHART BELOW
 - THE TANGENT LENGTH IS EQUAL TO THE TAPER LENGTH FOR A GIVEN STREET.



TRAFFIC CONTROL ELEMENTS

TAPER REQUIREMENTS

SPEED LIMIT (MPH)	TAPER LENGTH (L) (FEET)			MINIMUM NUMBER OF DEVICES FOR TAPER	MAXIMUM DEVICE SPACING IN FEET	
	10' LANE	11' LANE	12' LANE		ALONG TAPER	AFTER TAPER
20	70	75	80	5	20	20
25	105	115	125	6	25	25
30	150	165	180	7	30	30
35	205	225	245	8	35	35
40	270	295	320	9	40	40
45	450	495	540	13	45	45
50	500	550	600	13	50	50
55	550	605	660	13	55	55

RECOMMENDED SIGN SPACING(D) FOR ADVANCE WARNING SIGN SERIES

SPEED MILES PER HOUR	MINIMUM DISTANCE IN FEET BETWEEN SIGNS	FROM LAST SIGN TO TAPER
0-20	10 X SPEED LIMIT	10 X SPEED LIMIT
25-30	10 X SPEED LIMIT	10 X SPEED LIMIT
30-35	10 X SPEED LIMIT	10 X SPEED LIMIT
40-45	10 X SPEED LIMIT	10 X SPEED LIMIT
50-60	10 X SPEED LIMIT	10 X SPEED LIMIT

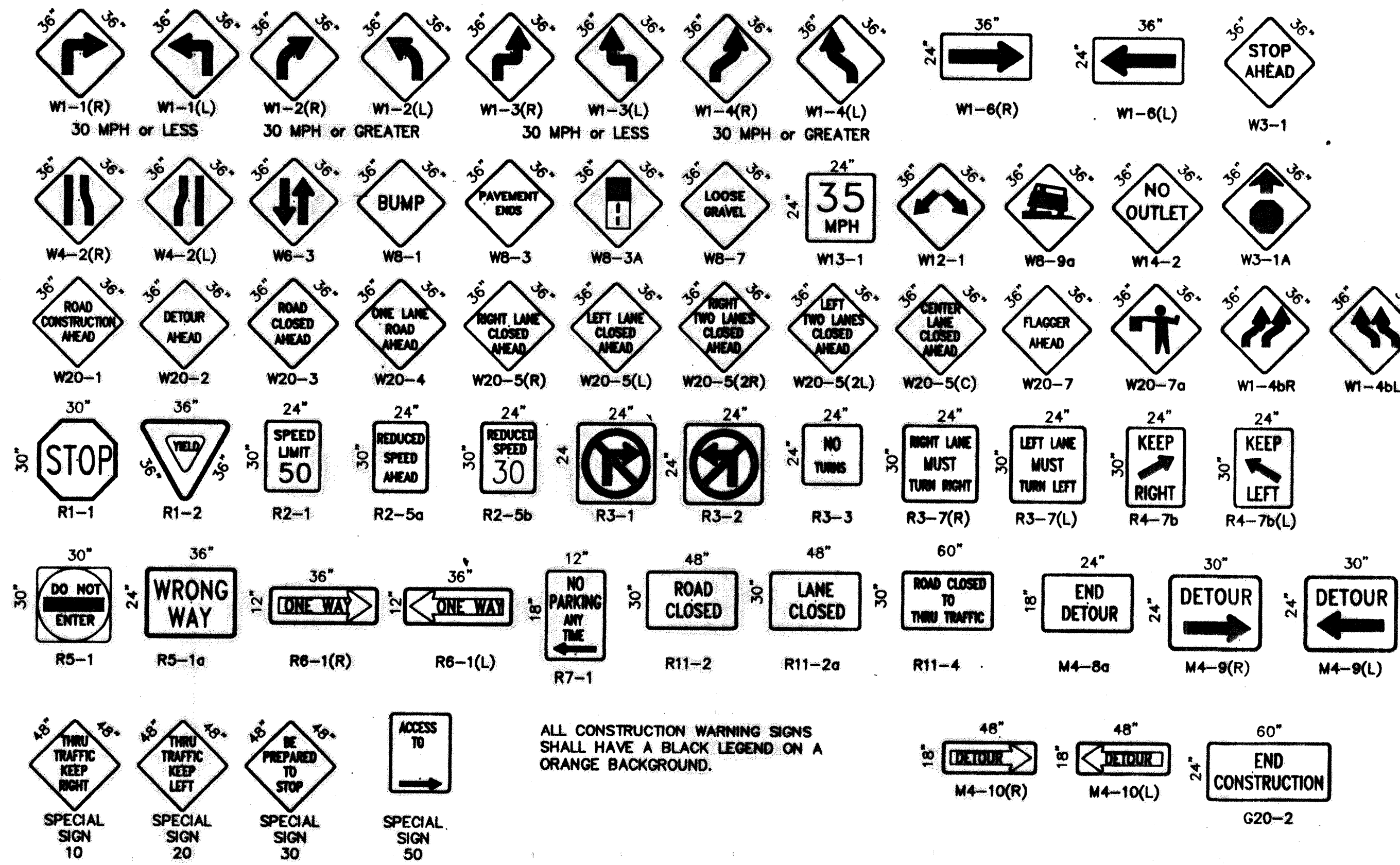
TAPER CRITERIA

TYPE OF TAPER	TAPER LENGTH
UPSTREAM TAPER:	
MERGING TAPER	L MINIMUM
SHIFTING TAPER	1/2 L MINIMUM
SHOULDER TAPER	1/2 L MINIMUM
TWO-WAY TRAFFIC TAPER	100 FEET MAXIMUM
DOWNSTREAM TAPERS	100 FEET PER LANE

TAPER LENGTH COMPUTATION

SPEED LIMIT	
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR GREATER	$L = W \times S$
L = TAPER LENGTH	
W = WIDTH OF OFFSET IN FEET	
S = POSTED SPEED OR OFF-PEAK 85-PERCENTILE SPEED IN MPH	

SIGN FACE DETAILS



ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON A ORANGE BACKGROUND.

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: **KOREAN WAR VETERAN'S PARK - PHASE II**
SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS

DESIGN REVIEW COMMITTEE: CITY ENGINEER APPROVAL: NO. 2020/92

COA Standard

PROJECT NO. 5020.92 MAP NO. SHEET 1 OF 28

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