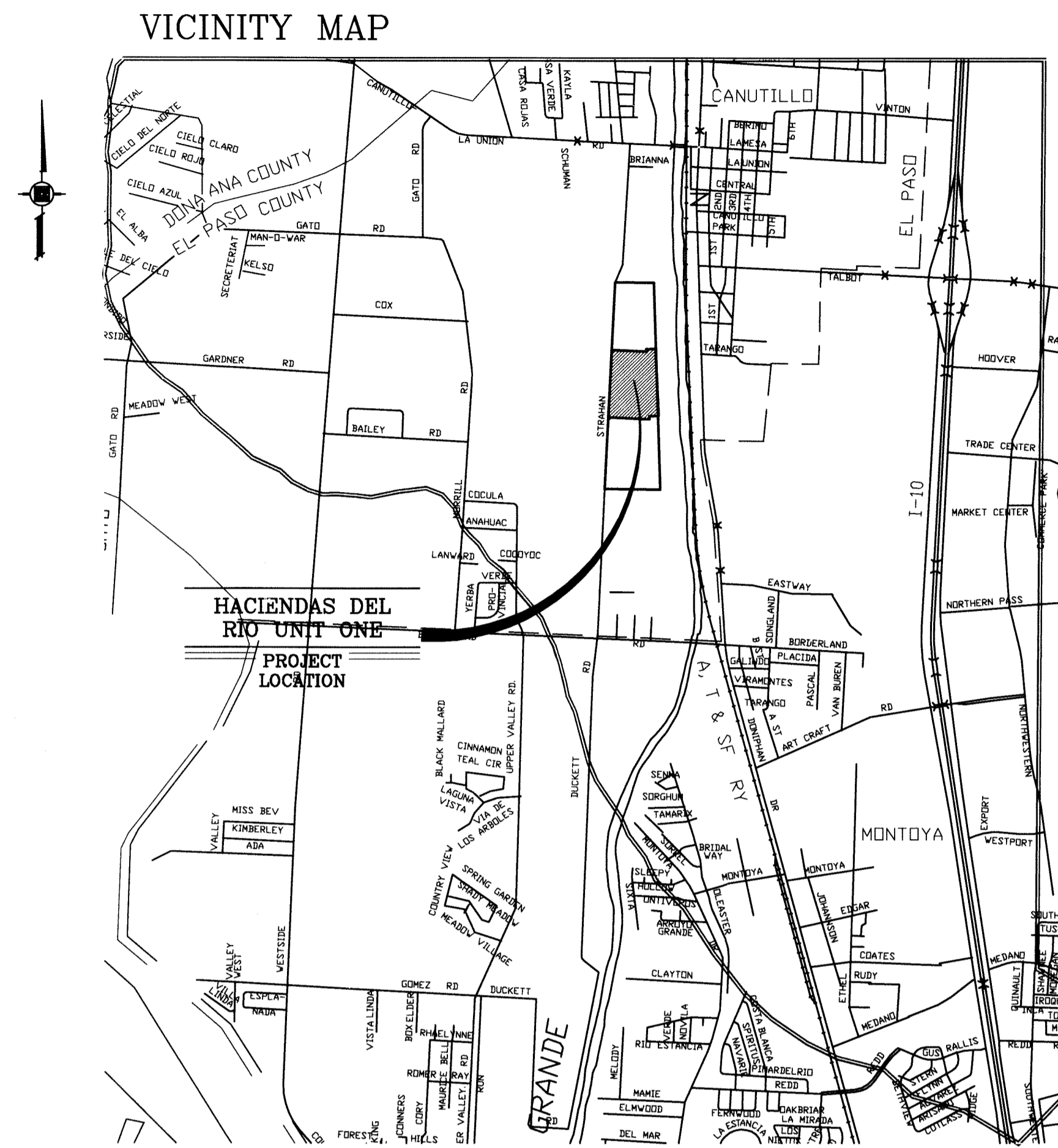
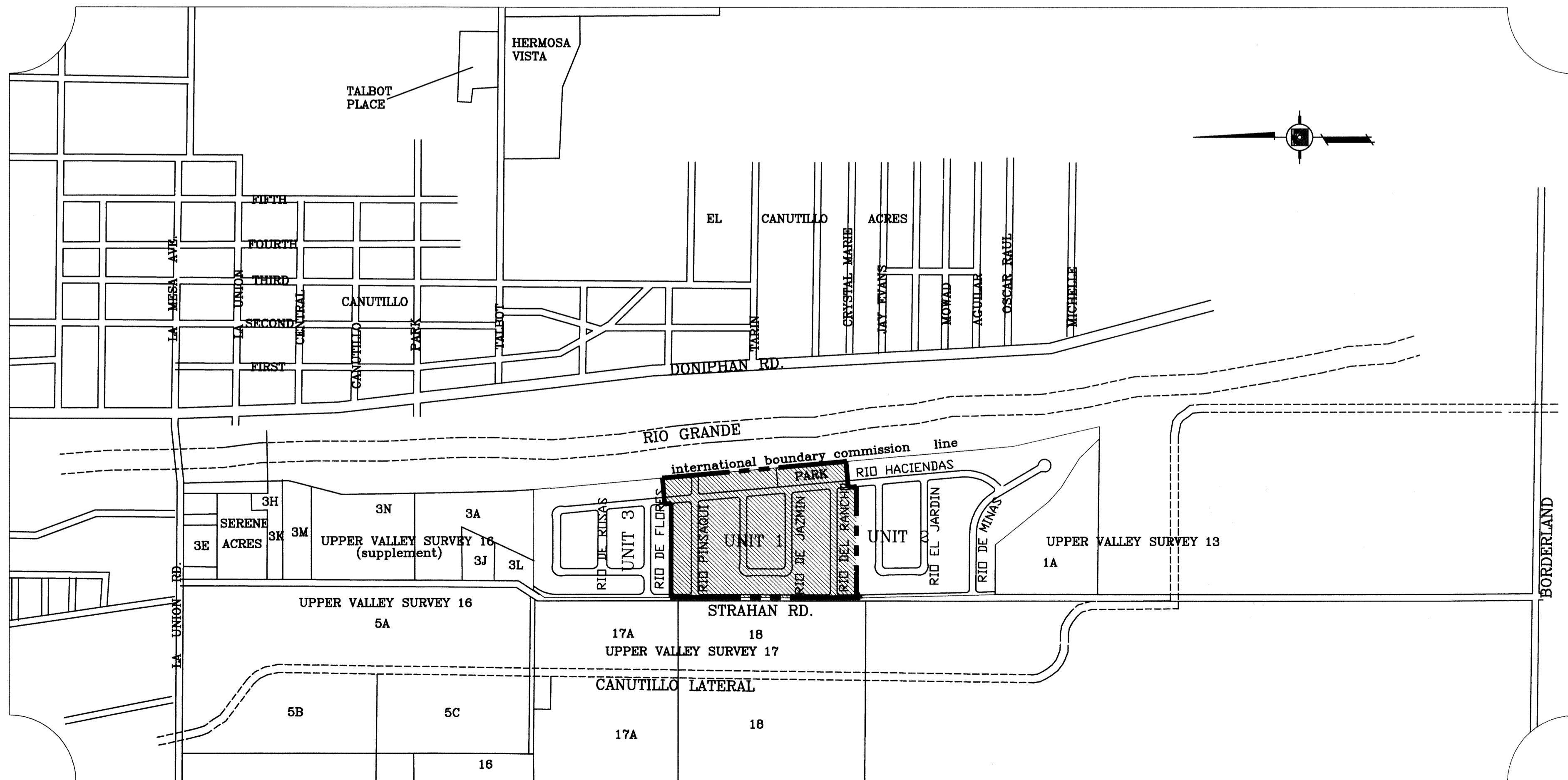


LOCATION MAP

SCALE: 1"=600'



CITY DEVELOPMENT DEPARTMENT
 Reviewed For Conformance For Condition Related To:
 - Sidewalks - Driveways
 - Grading & Drainage - Retaining Rock Walls
 - Wheelchair Ramps - On the Pooling of Storm Water
 - On the Parking Layout
 Contractor Must Call 24 Hours Prior To Construction for Inspections
Capital Truck 6/4/2015



STREET IMPROVEMENTS

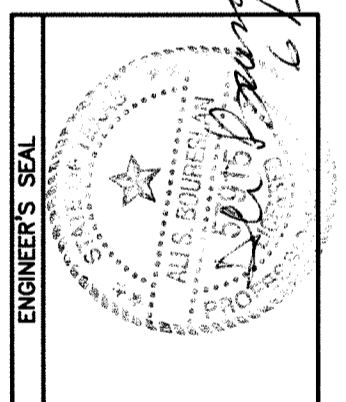
I N D E X

TITLE	SHEET No.
COVER SHEET	1 OF 24
PLAT	2 OF 24
ENGINEERING REPORT	3 OF 24
WATER & SEWER DISTRIBUTION PLAN	4 OF 24
GRADING	5 OF 24
GRADING SECTIONS	6&6A OF 24
DRAINAGE PLAN	7 OF 24
S.W.P.P. AND STANDARD DETAILS	8&9 OF 24
RIO HACIENDAS CIR.	10&11 OF 24
RIO PINSAQUI CT.	12 OF 24
RIO DEL RANCHO CT.	13&14 OF 24
RIO DE JAZMIN CIR.	15&16 OF 24
STRAHAN ROAD	17-21 OF 24
STANDARD DETAILS	22&23 OF 24
ILLUMINATION AND TRAFFIC CONTROL PLAN	24 OF 24
LANDSCAPE & IRRIGATION PLAN	L1-18



BENCHMARK:
 NOS BRASS CAP MARKER IN CONCRETE V-27 WITH
 NUMBER 1000000 CITY OF EL PASO ELEV=3749.48'

HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 3B AND 3D1 AND ALL OF
 TRACT 9C AND A 30 FOOT VALLEY SURVEYS
 UPPER VALLEY SURVEYS
 EL PASO COUNTY, TEXAS
 CONTAINING 33.5014 ACRES



CIVIL ENGINEERING SERVICES
 ALI BOURSLESAN
 P.E. #57915 - FIRM#005017
 3616 MCGRAW, SUITE A
 EL PASO, TEXAS 79905
 PH#915-691-8312

DRAWN BY:
 EA
 CHECKED BY:
 CJ
 PROJECT No.
 HACIENDAS 1
 DATE:
 JANUARY 12, 2015
 SHEET TITLE:

COVER SHEET

DRAINAGE REPORT:

Haciendas Del Rio Unit One is on land that is very flat former farmland and has no predominant runoff flow direction. The current storm runoff ponds on site. There are no offsite drainage areas that discharge to site lots themselves except for portions of the abutting street. Strahan Road will be improved along the subdivision to include widening of pavement section and curb. There are no drainage structures within the subdivision or abutting the street.

This subdivision is located in Flood Zone X as per FIRM map of El Paso County, Community Panel Number 480212, PANEL NUMBER 0025B, effective date of September 4, 1991. No portion of Haciendas Del Rio is shown to be within a special flood hazard area subject to a one percent or greater chance of flooding in any given year. However, the existing streets are susceptible to inundation during rainstorms.

The 100-year flood for the lots will be contained within the lots themselves. All lots will be residential usages. As further noted, the finished floor elevation of each house is required to be at least 18 inches above the top of the average height of the curb in front of the lot, or 12 inches above the natural ground level surrounding the foundation, whichever is higher.

All lots in Haciendas Del Rio are subject to on-site ponding and County on-site ponding requirements as stated on the plat.

Certification:

I certify that to the best of my knowledge Haciendas Del Rio is located in Flood Zone X (Unshaded) as per Community panel no. 480212-0025B, dated September 4, 1991.

Ali Boureslan
 Ali Boureslan, P.E.
 registered professional engineer
 registration No. 57915 TX.
 Firm No. 005017

8/13/15
 Date

REPORTE DE DRENAJE PLUVIAL.

El fraccionamiento de Haciendas Del Rio Unidad Uno esta ubicado sobre terreno plano que solia ser utilizado para la agricultura y sin direccion predominante de escurrimiento pluvial. El escurrimiento pluvial existente se estanca dentro del terreno. No existen areas externas que desembocuen escurrimiento pluviales hacia los lotes en el sitio excepto una porcion de una calle adjunta. La calle Strahan sera mejorada a lo largo de el fraccionamiento incluyendo una seccion mas amplia de pavimento y cordon.

Este Fraccionamiento esta localizado en una zona de inundacion "X" de acuerdo al mapa FIRM de el Condado de El Paso, Texas con Numero de Panel de Comunidad 480212-0025-B con fecha efectiva September 04, 1991. No hay ninguna parte del terreno de Haciendas Del Rio que identifique estar dentro de una area especial de peligro de inundacion sujeta a un porcentaje o mas de probabilidad de inundarse en cualquier dado ano. Mas sin embargo, las calles existentes estan susceptibles a inundarse durante las tormentas.

La inundacion de 100-años de los lotes sera contenida dentro de los mismos lotes. Todos los lotes seran utilizados como lotes residenciales. Como una nota senalada, la elevacion de la superficie de la loza de cada una de las residencias ser por lo menos 18 pulgadas mas alta que la elevacion promedio del cordon frente del lote, o 12 pulgadas mas alta alrededor del nivel de suelo sobre el cual fue construido la cimentacion, cualsea que sea mas alta.

Todos los lotes de Haciendas Del Rio estan sujeta a almacenamiento de inundacion en sitio y a los requisitos del Condado de almacenamiento de inundacion en sitio como esta declarado en el plano de lotificacion.

Certificacion:

A mejor de mi conocimiento, yo certifico que este Fraccionamiento esta localizado en una zona de inundacion "X" de acuerdo al mapa FIRM de el Condado de El Paso, Texas con Numero de Panel de Comunidad 480212-0025B con fecha efectiva Septiembre 04, 1991.

Ali Boureslan
 Ali Boureslan, P.E.
 Ingeniero Profesional Registrado
 Numero de registracion 57915 TX
 Firm No. 005017

8/13/15
 Fecha

A MINIMUM OF FORTY-EIGHT (48) HOUR NOTICE MUST BE GIVEN THE PERTINENT RESPONSIBLE AUTHORITY PRIOR TO COMMENCING OPERATIONS IN THE PROXIMITY OF THEIR UTILITIES TO APPRAISE THEM OF THIS CONDITION, UNLESS OTHERWISE SPECIFIED.

THE FOLLOWING CONTACT LIST INCLUDES THE KNOWN RESPONSIBLE AUTHORITIES:

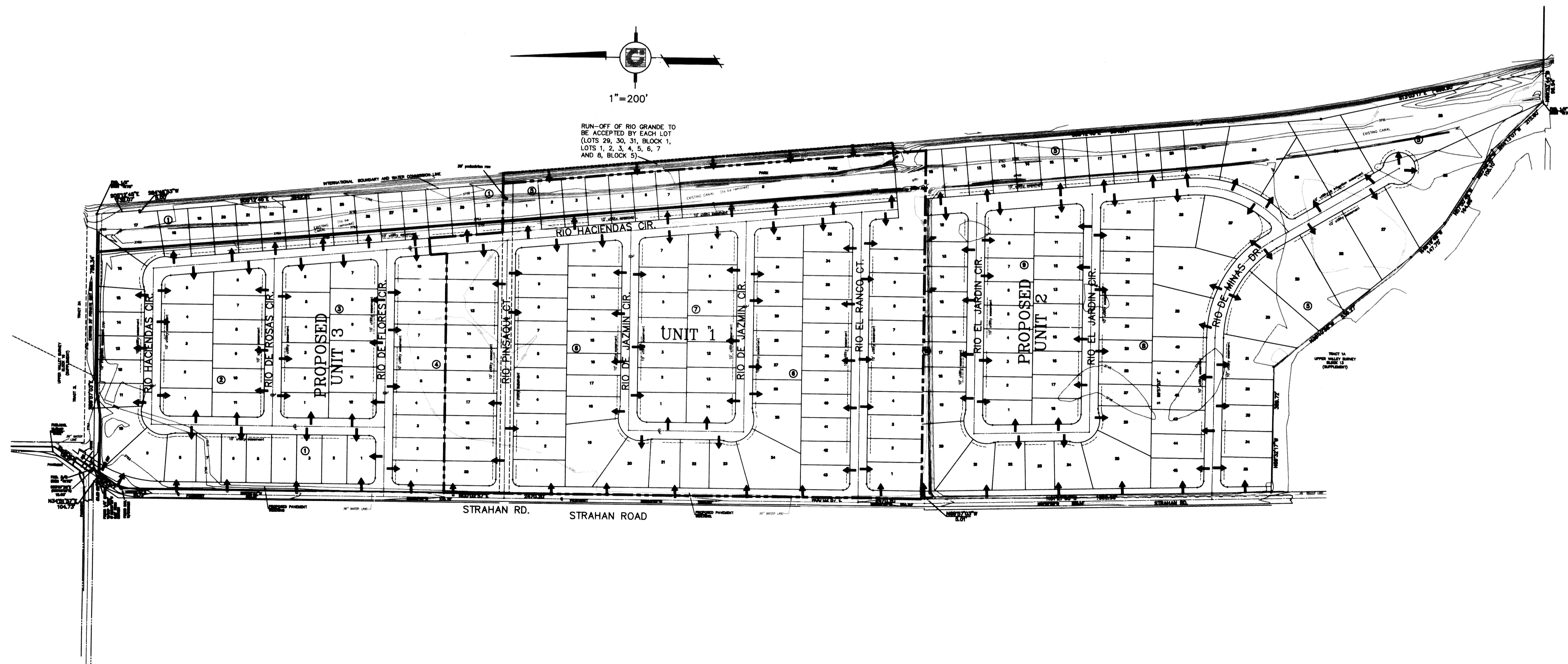
- TEXAS GAS SERVICE
- IVAN ALCOCER.....(915) 680-7238
- EL PASO ELECTRIC COMPANY
- VICTOR CABRAL.....(915) 543-5821
- SBC
- MANNY MORENO.....(915) 595-5107
- EL PASO WATER UTILITIES
- AMY CASTNER.....(915) 594-5647
- TIME WARNER CABLE
- JOHN MARES.....(915) 775-7432
- TEXAS DEPARTMENT OF TRANSPORTATION
- RAY LUCERO.....(915) 790-4308
- TRAFFIC AND TRANSPORTATION DEPT.
- SERGIO REYES.....(915) 541-4044

DRAINAGE CALCULATIONS (100 YEAR STORM FREQUENCY:

Pond Calcs: $Q = \frac{A \times R \times C}{12}$
 A = Watershed Area (acres)
 R = 4 inches of rainfall in 24 hours
 C = 0.5 for residential

STORM WATER POLLUTION PLAN AND DETAILS: A SWPPP will be provided at the time of Lot development and Construction by the owners of each individual Lot.

MAP OF TOPOGRAPHY AND DRAINAGE (MAPA DE TOPOGRAFIA Y DRENAGE PLUVIAL)



On-site Ponding Requirements:

1. All lots in the subdivision are subject to on-site ponding. Lot owners are responsible for maintaining adequate provisions to accommodate all stormwater runoff generated from their respective lot plus one-half the runoff generated from all abutting street Right-Of-Ways directly fronting the lot.
2. Walls constructed abutting street Right-Of-Ways shall be constructed with drain pipes allowing the street runoff to be conveyed to the subject property.
3. On-site ponding areas shall have maximum one (vertical) to three (horizontal) side slopes and a maximum of twelve (12) inches deep based on a one hundred year storm.
4. Permanent elevation markers shall be installed to define the levels to be maintained to ensure the effectiveness of on-site ponding. Permanent elevation markers shall not be moved, covered or altered with written permission from the County Engineer.
5. The County is granted permanent right of access to inspect to inspect the ponding areas and permanent elevation makers.
6. Filling or changing the pond, or allowing the pond to be filled or changed to an elevation greater than established by the permanent elevation markers, is prohibited.
7. On-site ponding areas and permanent elevation markers shall be constructed and inspected prior to building occupancy. Permanent Certificate of Compliance, required to obtain utility services, will be issued only after the County of El Paso has performed the inspection.
8. No person shall be permitted to impair the functionality of an on-site pond. No more than fifty percent (50%) of the area of any residential lot conveyed by deed shall be covered by improvements, either temporary or permanent, which shed stormwater, including but not limited to, buildings, driveways, patios or landscaping underlaid with plastic sheeting or other impermeable material.
9. In the event that the functionality of an on-site pond becomes impaired weather by act of man or nature, the owner of the lot on which the impaired pond is located shall perform all corrective actions required to restore that functionality.
10. Any owner notified in writing by the County Engineer of corrective actions required to restore the functionality of an on-site pond or drainage problem on the lot shall comply within forty-five calendar days of receipt of such notice; provided, however, that nothing herein shall prevent the County from mandating an earlier time for commencement of completion, during times of emergency, where there is imminent danger of loss of life, limb or property.
11. Owner of property utilizing on-site ponding waives any claim or cause of action against the County, officials or employees, for any death, injury or property damage resulting from alteration of the ponding capacity for that lot, including lack of maintenance.
12. These on-site ponding requirements shall be enforced by injunctive relief without the requirement for bond or other security.
13. The conveyance of property permitting on-site ponding shall declare in conspicuous language in the deed that the property is subject to on-site ponding requirements, maintenance of elevation markers, standing water on lot, and ingress and egress for inspection as stated on the plat.
14. ON-SITE RETENTION PONDS SHALL BE DESIGNED BY A PROFESSIONAL LICENSED ENGINEER AND SHALL BE COMPLIANT WITH THE CURRENT DESIGN STANDARDS FOR THE EL PASO COUNTY.
15. ALL ON-SITE LOT RETENTION PONDS SHALL BE CONSTRUCTED AT THE TIME OF LOT DEVELOPMENT PRIOR TO ANY CONSTRUCTION OF A LOT. GRADING AND DRAINAGE PLANS MUST BE SUBMITTED FOR APPROVAL BY EL PASO PUBLIC WORKS DEPARTMENT AND PREPARED BY A TEXAS LICENSED ENGINEER.

HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACT 88 AND ALL OF TRACT 86 AND A 90 FOOT COUNTY ROW, BLOCK 16 UPPER VALLEY SURVEY, EL PASO COUNTY, TEXAS. CONTAINING 83.4601 ACRES.

CIVIL ENGINEER
AS SERVICES
 ALI BOURESAN
 P.E. #57915-FIRM#005017
 3616 AGARUE, SUITE A
 EL PASO, TX 79905
 PH: 915-561-3312

DRAWN BY: EA
 CHECKED BY: CJ
 PROJECT No. HACIENDAS 1
 DATE: JANUARY 12, 2015
 SHEET TITLE:

ENGINEERING REPORT
 PAGE: 2
 OF: 3

REVISED DATE:
 JUNE 05, 2015
 AUGUST 10, 2015

FINAL ENGINEERING REPORT FOR HACIENDAS DEL RIO

WATER SUPPLY: DESCRIPTION

Water supply: Description

Haciendas Del Rio Unit One will be provided potable water by El Paso Water Utilities. Haciendas Del Rio Partners Ltd. and El Paso Water Utilities have entered into a Developers Agreement in which EPWU has promised to provide sufficient water to the subdivision for at least 30 years and EPWU will provide documentation to sufficiently establish the long term quality and quantity of the available water supplies to service the full development of this subdivision. EPWU has an existing 16 inch water line at the intersection of Strahan Road and La Union Road. Approximately 5,200 lineal feet of 16 inch water line will be extended from La Union Road to the subdivision boundary and along Strahan Road throughout the subdivision boundary along Strahan Road. From the 16 inch line, 8 inch water lines will be extended through all the streets with stubouts to each residential lot within the subdivision. The developer will also install a minimum of ten fire hydrants as part of the water improvements. El Paso water Utilities will design the water line system. The water facilities will be fully operable as of _____ 2015.

PROVISION DE AGUA: DESCRIPCION

El fraccionamiento Haciendas Del Rio Unidad Uno recibirá su provisión de agua potable de El Paso Water Utilities. Haciendas Del Rio Partners Ltd. y El Paso Water Utilities han llegado a un acuerdo donde El Paso Water Utilities promete proveer suficiente agua potable al fraccionamiento por lo menos 30 años y donde El Paso Water Utilities proveera documentación que establece el largo plazo y la calidad y cantidad del agua disponible para servir el el fraccionamiento completo. El Paso Water Utilities tiene una línea de agua de 16 pulgadas en la intersección de Strahan Rd. y La Union Rd. Aproximadamente 5200 pies de línea de 16 pulgadas se extenderá desde La Union Rd hacia Strahan Rd. hasta el fraccionamiento y a lo largo del lindero frente a Strahan Rd. De esta línea de 16 pulgadas, líneas de 8 pulgadas se extenderán hacia el interior del fraccionamiento por las calles y se colocaran tubos de conexión para cada lote del fraccionamiento. El dueño instalará un mínimo de 10 bocas de incendios. El Paso Water Utilities hará el diseño del sistema de agua. El sistema de agua estará completo y operando desde la fecha de _____ del 2015.

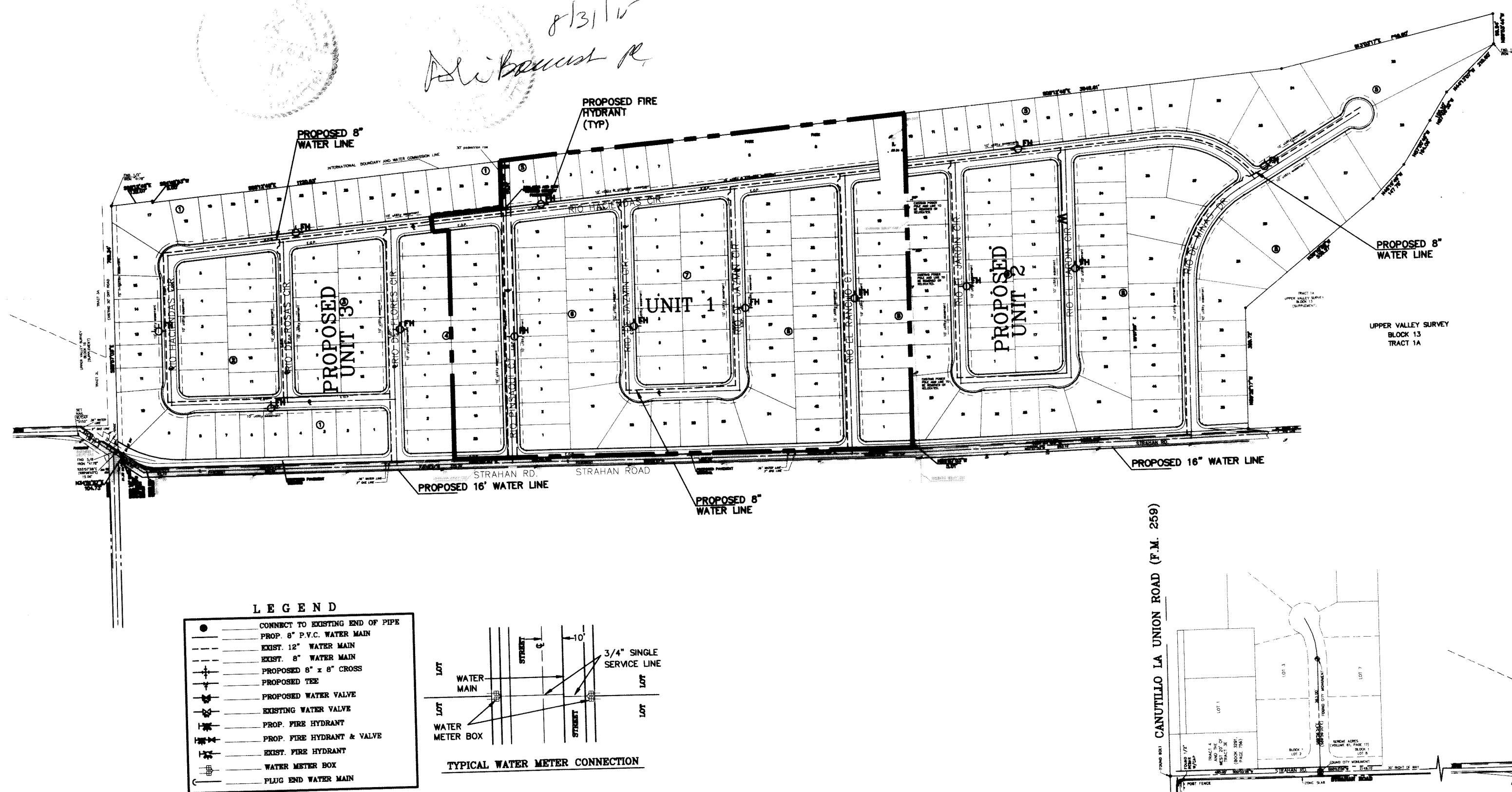
CERTIFICATION:

By my signature below, I certify that the water and sewage service facilities described above were designed and constructed in compliance with the TNRCC Rules and Regulations for Public Water Systems under section 290.44, Water Distribution; Texas Water Code 26.034; and TNRCC Chapter 317-Design Criteria for Sewerage Systems.

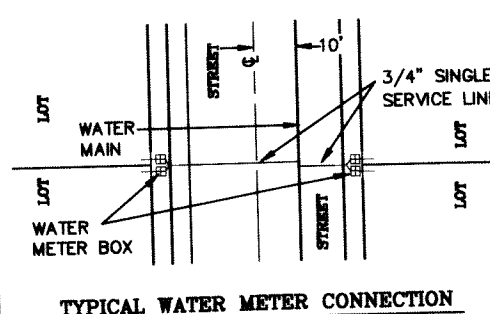
Ali Bourslesan
Ali Bourslesan
(Registration No. 57915)
ENGINEER

8/31/15
DATE

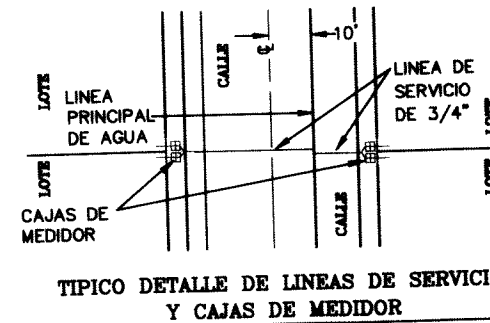
MAP OF WATER DISTRIBUTION SYSTEM (MAPA DEL SISTEMA DE DISTRIBUCION DE AGUA)



- LEGEND**
- CONNECT TO EXISTING END OF PIPE
 - PROP. 8" P.V.C. WATER MAIN
 - EXIST. 16" WATER MAIN
 - EXIST. 8" WATER MAIN
 - PROPOSED 8" x 8" CROSS
 - PROPOSED TEE
 - PROPOSED WATER VALVE
 - EXISTING WATER VALVE
 - PROP. FIRE HYDRANT
 - PROP. FIRE HYDRANT & VALVE
 - EXIST. FIRE HYDRANT
 - WATER METER BOX
 - FLUG END WATER MAIN



- SIMBOLOGIA**
- CONECTAR A UN CONDUCTO EXISTENTE
 - PROPUESTA PARA LINEA DE AGUA DE 8" DE PVC
 - CONDUCTO DE AGUA EXISTENTE DE 16"
 - CONDUCTO DE AGUA EXISTENTE DE 8"
 - PROPUESTA DE UNA CONEXION DE 8" x 8" (EN CRUZ)
 - PROPUESTA DE UNA CONEXION (EN "T")
 - PROPUESTA DE UNA VALVULA DE AGUA
 - VALVULA DE AGUA EXISTENTE
 - PROPUESTA DE HIDRANTE
 - PROPUESTA DE HIDRANTE Y VALVULA
 - EXIST. HIDRANTE
 - HIDRANTE EXISTENTE
 - CAJA DE MEDIDOR DE AGUA
 - TAPON DE AGUA AL EXTREMO DE LINEA PRINCIPAL



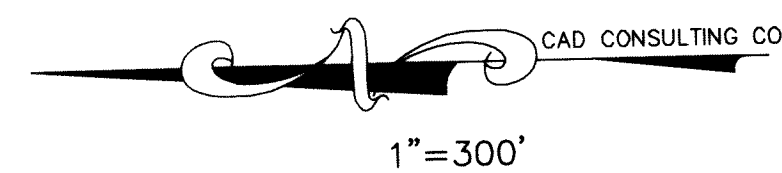
REPORTE FINAL DE INGENIERIA PARA EL FRACCIONAMIENTO HACIENDAS DEL RIO
(FINAL ENGINEERING REPORT FOR HACIENDAS DEL RIO)

SEWAGE FACILITIES: DESCRIPTION

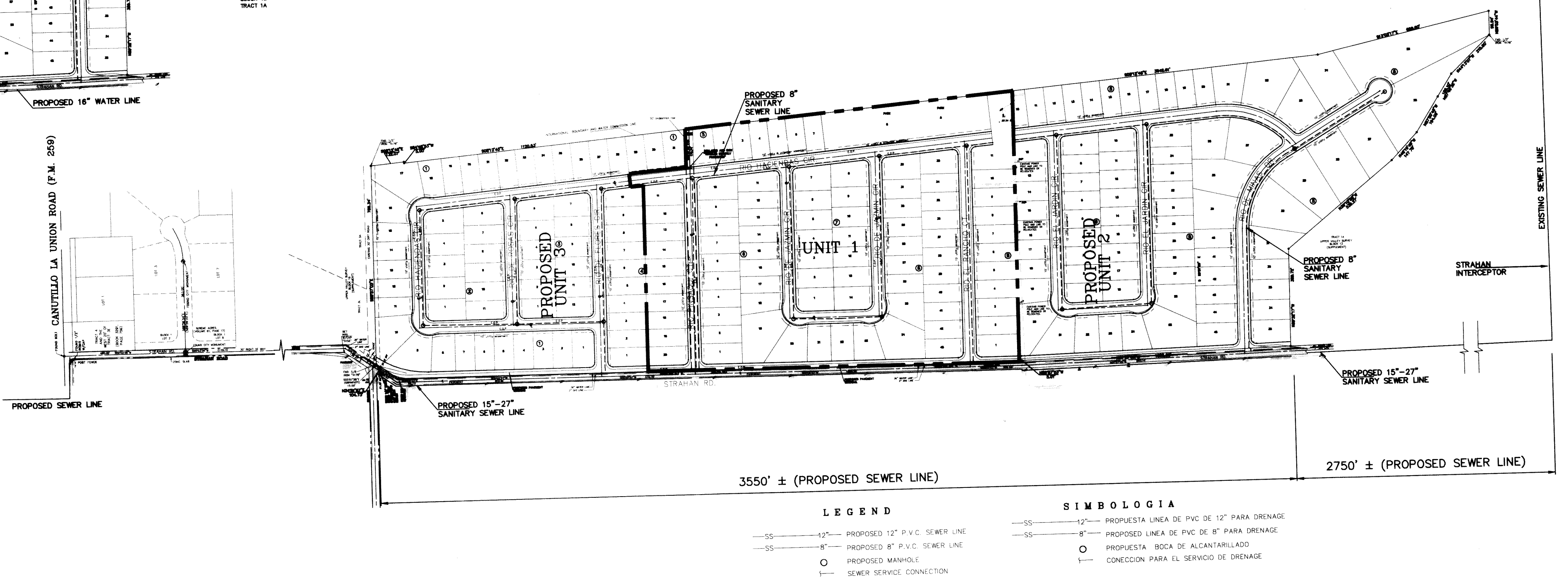
Haciendas Del Rio Unit One will be provided municipal sewer service by El Paso Water Utilities. Haciendas Del Rio Partners Ltd. and El Paso Water Utilities have entered into a Developers Agreement in which EPWU has promised to provide sufficient wastewater service to the subdivision. EPWU will have a 27 inch sewer line at the intersection of Strahan Road and Easy Way Lift Station extension. Approximately 3550 lineal feet of 15 to 27 inch sewer line will be extended along Strahan Road to the subdivision. From the 15 inch to 27 inch line, 8 inch sewer lines will be extended through all the streets with stubouts to each residential lot within the subdivision. El Paso water Utilities will design the water line system. The water facilities will be fully operable as of _____ 2015.

DRENAJE: DESCRIPCION

El fraccionamiento Haciendas Del Rio Unidad Uno proveera servicio municipal de drenaje por medio de El Paso Water Utilities. Haciendas Del Rio Partners Ltd. y El Paso Water Utilities han llegado a un acuerdo en el cual El Paso Water Utilities promete proveer suficiente servicio de drenaje al fraccionamiento. El Paso Water Utilities tendrá una línea de 27 pulgadas en la intersección de Strahan Rd y la extensión de la línea de drenaje de "Easy Way Lift Station". Aproximadamente 3550 pies de línea entre 15 a 27 pulgadas de línea de drenaje será instalada en Strahan Rd. frente al fraccionamiento. De esta línea de 15 a 27 pulgadas otras líneas de 8 pulgadas serán extendidas hacia el interior del fraccionamiento por cada calle con tubos de conexión para cada lote residencial dentro del fraccionamiento. El Paso Water Utilities hará el diseño del sistema de drenaje. El sistema de drenaje será completo y servible desde la fecha de _____ del 2015.



MAP OF WASTEWATER COLLECTION SYSTEM (MAPA DEL SISTEMA COLECTOR DE AGUAS NEGRAS)



- LEGEND**
- SS— 12" PROPOSED 12" P.V.C. SEWER LINE
 - SS— 8" PROPOSED 8" P.V.C. SEWER LINE
 - PROPOSED MANHOLE
 - SEWER SERVICE CONNECTION

- SIMBOLOGIA**
- SS— 12" PROPUESTA LINEA DE PVC DE 12" PARA DRENAGE
 - SS— 8" PROPUESTA LINEA DE PVC DE 8" PARA DRENAGE
 - PROPUESTA BODA DE ALCANTARILLADO
 - CONECCION PARA EL SERVICIO DE DRENAGE

REVISED DATE:
JUNE 05, 2015
AUGUST 10, 2015

HACIENDAS DEL RIO UNIT ONE
BEING A PORTION OF TRACT 98 AND ALL OF TRACT 9C AND A 30 FOOT VALLEY SURVEY, EL PASO COUNTY, TEXAS.
CONTAINING 83.4801 ACRES

ENGINEER'S SEAL
Ali Bourslesan

CIVIL ENGINEER
4S ENGINEERING SERVICES
ALI BOURSLESAN
P.E. #57915 - FIRM#005017
3816 McRAE, SUITE A
EL PASO, TX 79925
PH#915-321-5312

DRAWN BY:
EA
CHECKED BY:
CJ
PROJECT No.
HACIENDAS 1
DATE:
JANUARY 12, 2015

SHEET TITLE:
WATER & SEWER DISTRIBUTION PLAN

PAGE: 3
OF: 3

NOTE:

1. A RETAINING WALL SHALL BE REQUIRED WHEN THE GRADE DIFFERENCE BETWEEN LOTS - LOTS / STREET EXCEEDS 2'-0".
2. DEVELOPER TO COMPLY WITH TITLE 19 - SUBDIVISION ORDINANCE, PAVEMENT CUT TRENCH REPAIR, ADDENDUM 1, AS TO ANY PAVING CUTS. THIS NOTE APPLIES TO COUNTRY CLUB ROAD AND MONTROYA DRIVE ONLY. IF MORE THAN 6 CUTS WITHIN 500 FT., DEVELOPER SHALL REPAVE THE ENTIRE WIDTH OF THE STREET.
3. ALL SITE IMPROVEMENTS TO COMPLY WITH SUBDIVISION PLAT DESIGN STANDARDS.
4. INDIVIDUAL BUILDING PAD GRADING TO BE DONE BY BUILDER. GRADING PERMIT SHALL BE REQUIRED AT TIME OF BUILDING PERMIT.
5. ELEVATION MARKERS WILL BE PLACED ON EACH LOT PRIOR TO CERTIFICATE OF OCCUPANCY.
6. PRELIMINARY SOILS TEST SHALL BE SUBMITTED. FINAL PERCOLATION RATE TEST, SOILS TESTS, AND WATER TABLE ELEVATION INFORMATION TO BE SUBMITTED PRIOR TO STREET ACCEPTANCE AND/OR BUILDING PERMITS.
7. INDIVIDUAL S.W.P.'S & DETAILS AT TIME OF BUILDING PERMIT.
8. ONE PERCOLATION TEST PER BLOCK PRIOR TO BUILDING PERMIT ISSUANCE.
9. A MINIMUM OF 3 PERCOLATION TESTS TO BE SUBMITTED BY THE DEVELOPER FOR THE "PARK SITE" PRIOR TO COMMENCEMENT OF ANY WORK WITH-IN "PARK SITE".

GENERAL NOTES:

1. IMPROVEMENT WITHIN COUNTY R.O.W. SHALL COMPLY WITH SUBDIVISION DESIGN STANDARDS AND REGULATIONS.
2. CONTRACTOR SHALL PROVIDE TEMPORARY MEASURES FOR THE MANAGEMENT OF STORM WATER RUNOFF EXTERIOR DRAINAGE AND ON SITE DURING THE COURSE OF THE CONSTRUCTION. TEMPORARY BERMS, DESILTING BASIN, CHECK DAMS, PIPING ETC. SHALL BE PROVIDED AS NECESSARY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND NOTIFICATION WITH ALL APPURTENANT UTILITY COMPANIES WHOSE LINES ARE WITHIN THE CONSTRUCTION CONTRACT AREA. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES 48 HOURS PRIOR TO ANY CONSTRUCTION ON SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COSTS FINANCIALLY FOR ANY DISRUPTION TO SERVICE EITHER ON SITE OR OFF SITE DUE TO BREAKAGE OF UTILITY LINES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DATA SHOWN ON THE PLANS. IF DISCREPANCIES ARE FOUND THE CONTRACTOR SHALL NOTIFY THE OWNER OR ENGINEER IMMEDIATELY SO THAT PROPER CORRECTIONS CAN BE MADE.
5. EQUIPMENT OF A CONDITION AND DESIGN SUFFICIENT TO ENSURE A THOROUGH AND WORKMANLIKE PROSECUTION OF THE PROJECT SHALL BE USED AT ALL TIMES.
6. ALL WASTE MATERIALS INCLUDING EXCAVATION, CURBING, PAVEMENT, ETC. SHALL BE DISPOSED OF AS DESIGNATED BY THE OWNER OR HIS REPRESENTATIVE.
7. THE CONTRACTOR SHALL NOTIFY THE OWNER, OR HIS REPRESENTATIVE, IN SUFFICIENT TIME IN ADVANCE OF DELIVERY OF MATERIALS TO BE SUPPLIED BY HIM UNDER THIS PROJECT, IN ORDER THAT THE OWNER MAY ARRANGE, IF DESIRED, INSPECTION AND TESTING FOR SAME.
8. SAFE AND REASONABLE ACCESS FOR THIS SITE MUST BE MAINTAINED AT ALL TIMES DURING THE LIFE OF THE PROJECT.
9. ANY CAVITY REMAINING OPEN DURING NONWORKING HOURS MUST BE GUARDED BY FLASHER TYPE BARRICADES WITH STRINGERS PLACED BETWEEN THE TOPS OF THE BARRICADES.
10. ALL SLOPE AND SWALE MAINTENANCE TO BE DONE BY PROPERTY OWNERS.

NOTES PERTAINING TO "PARK SITE"

1. WHERE POSSIBLE, UTILITY EASEMENTS SHALL NOT BE PLACED WITHIN PARK.
2. ALL UTILITIES SHALL BE AT MINIMUM FIVE (5') FEET DEEP.
3. NO SIONS, FIRE HYDRANTS, LIGHTS, NOBYS, ELECTRICAL/WATER BOXES, TELEPHONE PEDESTALS, NO OBSTRUCTIONS IN GENERAL, SHALL BE PLACED INTO PROPOSED PERIMETER SIDEWALK, NOR SHALL ANY UTILITY CONDUITS BE PLACED ALONG THE PARK SITE.
4. ANY UNSUITABLE SOIL CONDITIONS TO BE REMEDIATED TO ELIMINATE HARD SOILS, STONY SOILS, HIGH CALICHE SOILS, CLAY SOILS AND CONTAMINATED SOILS TO A MINIMUM OF 12 INCHES AND BY SHATTERING, IN TWO DIRECTIONS, OF HARD PAN CALICHE, CLAY SOILS, ROCKS TO A DEPTH OF 36 INCHES BELOW FINISHED GRADE AS REQUIRED FOR PROPER PLANTING FOR PARK REGION & CONSTRUCTION STANDARDS.
5. CONTRACTOR TO BE REQUIRED TO APPLY FOR AND OBTAIN GRADING PERMIT FROM LAND DEVELOPMENT SERVICES.
6. ALL PARK IMPROVEMENTS (SIDEWALKS, RAMPS, ETC) AND PAVED HIKE BIKE TRAILS (IF APPLICABLE) TO BE COMPLIANT WITH REQUIRED ACCESSIBILITY CRITERIA AS SET FORTH IN ADAAG & TAS STANDARDS AS MANDATED BY FEDERAL AND STATE GOVERNMENTS.
7. PROJECT MUST BE COORDINATED WITH TDR TO INSURE COMPLIANCE WITH TAS REQUIREMENTS TO INCLUDE INSPECTIONS AND CERTIFICATE OF SUBSTANTIAL COMPLETION; APPROVAL OF THE SUBDIVISION/PARK IMPROVEMENT PLANS IS SUBJECT TO APPLICANT PROVIDING PROOF OF THE PROJECT REGISTRATION NUMBER.
8. DEVELOPER SHALL OBTAIN SOIL SAMPLES (TAKEN FROM PROPOSED PARK SITE LOCATION FINISHED GROUND) & PROVIDE COMPLETE ANALYSIS REPORT (TEXTURAL, MINERAL AVAILABILITY, WATER INFILTRATION, DETAILED SALINITY & PH CONDUCTIVITY TEST) WITH RECOMMENDATIONS FOR SOILS AMENDMENTS AND PREPARATION TO INSURE EXISTING SOIL CONDITIONS ARE SUITABLE FOR TURF, SHRUBS AND TREE GROWTH; COORDINATE SITE VISIT WITH PARKS STAFF FOR COLLECTION OF SOIL SAMPLES.

LEGEND	
FF=00.67	PROPOSED FINISH FLOOR
FG=00.00	PROPOSED FINISH GROUND
00.00	PROPOSED SPOT ELEVATION
▲	HIGH POINT
▼	LOW POINT
— 4000 —	EXISTING CONTOUR
— 4000 —	EXISTING SPOT ELEVATION
— 4000 —	PROPOSED CONTOUR
— 4000 —	PROPOSED ROCK WALL
— 4000 —	EXISTING ROCK WALL
— 4000 —	DETAIL NO.
— 4000 —	SECTION DETAIL SHEET
— 4000 —	SECTION REFERENCE SHEET
— 4000 —	ASBUILT ELEVATION
— 4000 —	PROPOSED FLOW

GENERAL EARTHWORK NOTES:

1. NATURAL SUBGRADES TO SUPPORT STRUCTURAL FILL OR PAVEMENTS SHOULD BE STRIPPED OF ALL VEGETATION OR ORGANIC MATERIAL. EXPOSED SUBGRADE SHOULD BE SCARIFIED JUST PRIOR TO FILL PLACEMENT TO A MINIMUM DEPTH OF INCHES AND RECOMPACTED TO A MINIMUM DENSITY OF MAXIMUM DENSITY AS PER ASTM D-1557. ALL BACKFILL MATERIAL TO BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED EIGHT (8) INCH LIFTS AND COMPACTED AS BEFORE.

NOTE:
NO ROCK WALL OR FENCE ON FRONT PROPERTY LINE

NOTE:
HEREON DESCRIBED TRACTS LIES IN ZONE X (UNSHADED), COMMUNITY PLAN NO. 480212 025 B, DATED SEPTEMBER 4, 1991.

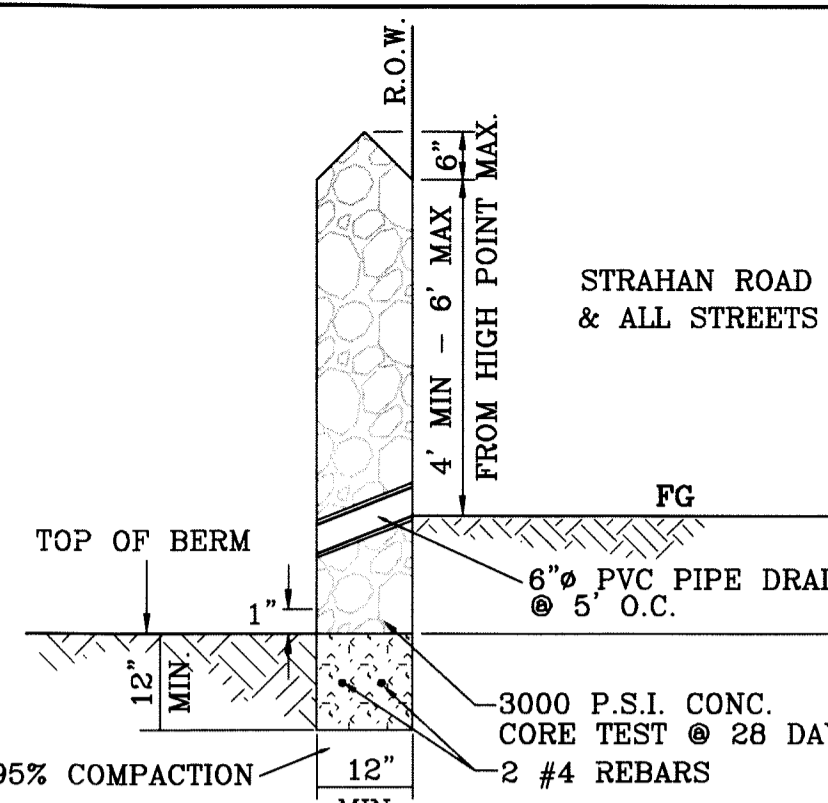
ON-SITE PONDING GRADING NOTES:

1. ON-SITE RETENTION PONDS SHALL BE DESIGNED BY A PROFESSIONAL LICENSED ENGINEER AND SHALL BE COMPLIANT WITH THE CURRENT DESIGN STANDARDS FOR THE EL PASO COUNTY.

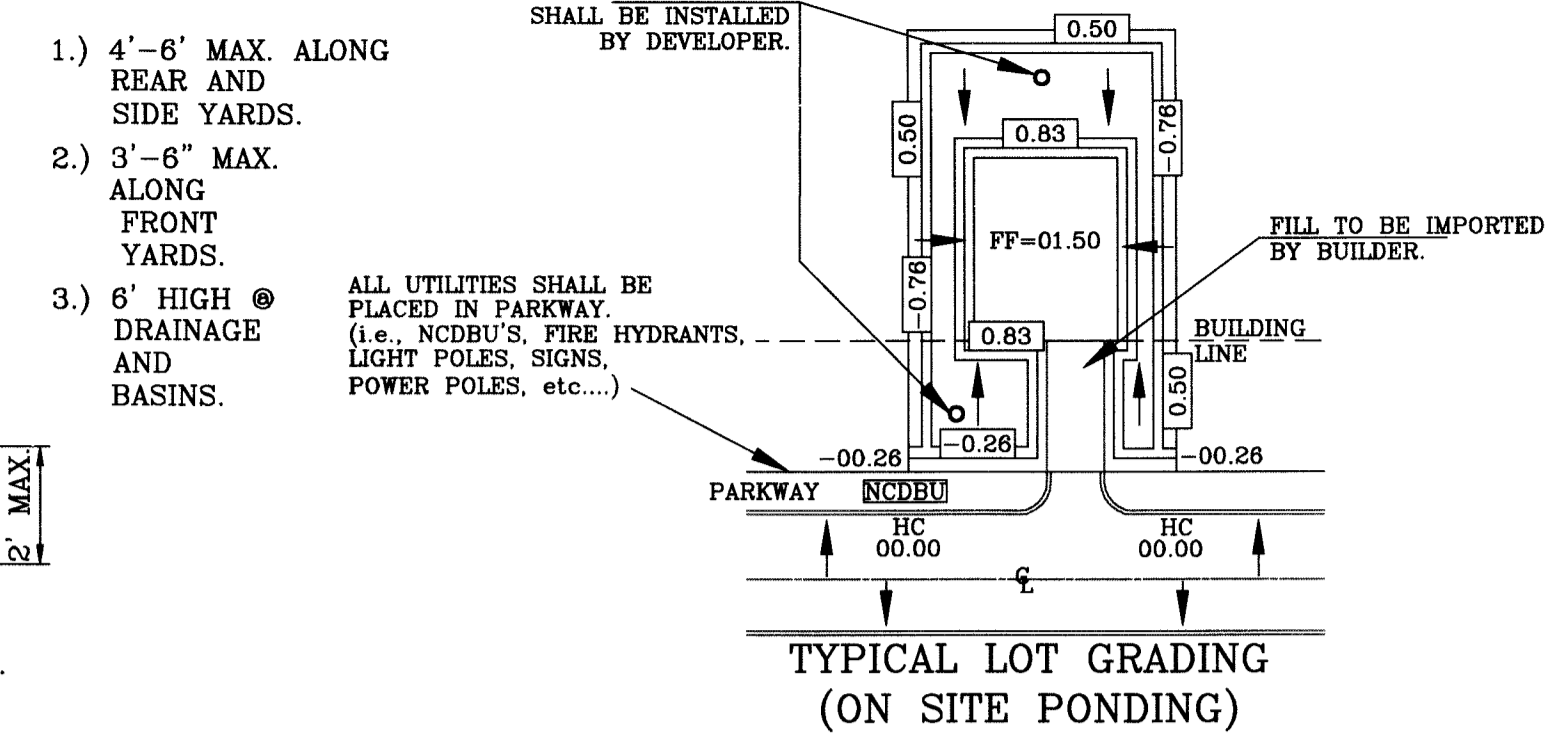
2. ALL ON-SITE LOT RETENTION PONDS SHALL BE CONSTRUCTED AT THE TIME OF LOT DEVELOPMENT. PRIOR TO ANY CONSTRUCTION OF A LOT, GRADING AND DRAINAGE PLANS MUST BE SUBMITTED FOR APPROVAL BY EL PASO PUBLIC WORKS DEPARTMENT PREPARED BY A TEXAS LICENSED ENGINEER.

ROCKWALL NOTES:

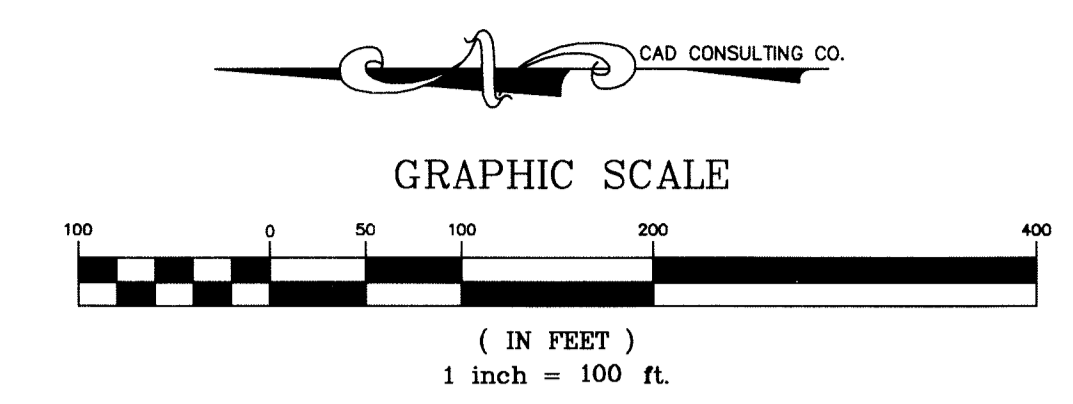
1. STONE FOR ROCKWALLS SHALL BE AS NEARLY UNIFORM IN SECTIONS AS IS PRACTICABLE. THE STONE SHALL BE DENSE AND RESISTANT OF AIR AND WATER.
2. MORTAR MUST BE TYPE "S" 1800 P.S.I. AS PER ASTM C270.
3. MASONRY WALLS OVER SIX (6) FEET IN HEIGHT AND THOSE USED FOR EARTH RETENTION OVER TWO (2) FEET MUST BE DESIGNED AS STRUCTURAL WALLS.
4. WALLS ADJACENT TO PONDING AREAS OR DRAINAGE DITCHES MAY BE CONSTRUCTED OF BRICK OR CONDER BLOCK AND SHALL NOT BE LESS THAN SIX (6) FEET HIGH.
5. ROCKWALL MORTAR JOINTS MUST NOT EXCEED TWO (2) INCHES.
6. PROVIDE ONE (1) INCH EXPANSION JOINTS AT EVERY 100 FEET.
7. ALL STONE SHALL BE THOROUGHLY SOAKED BEFORE BEING PLACED.
8. ALL STONE FOR ROCKWALLS SHALL BE FRACTURED QUARRIED ROCK, NOT RIVER ROCK SHALL BE ALLOWED.
9. ONE PERCOLATION TEST PER BLOCK PRIOR TO BUILDING PERMIT ISSUANCE.



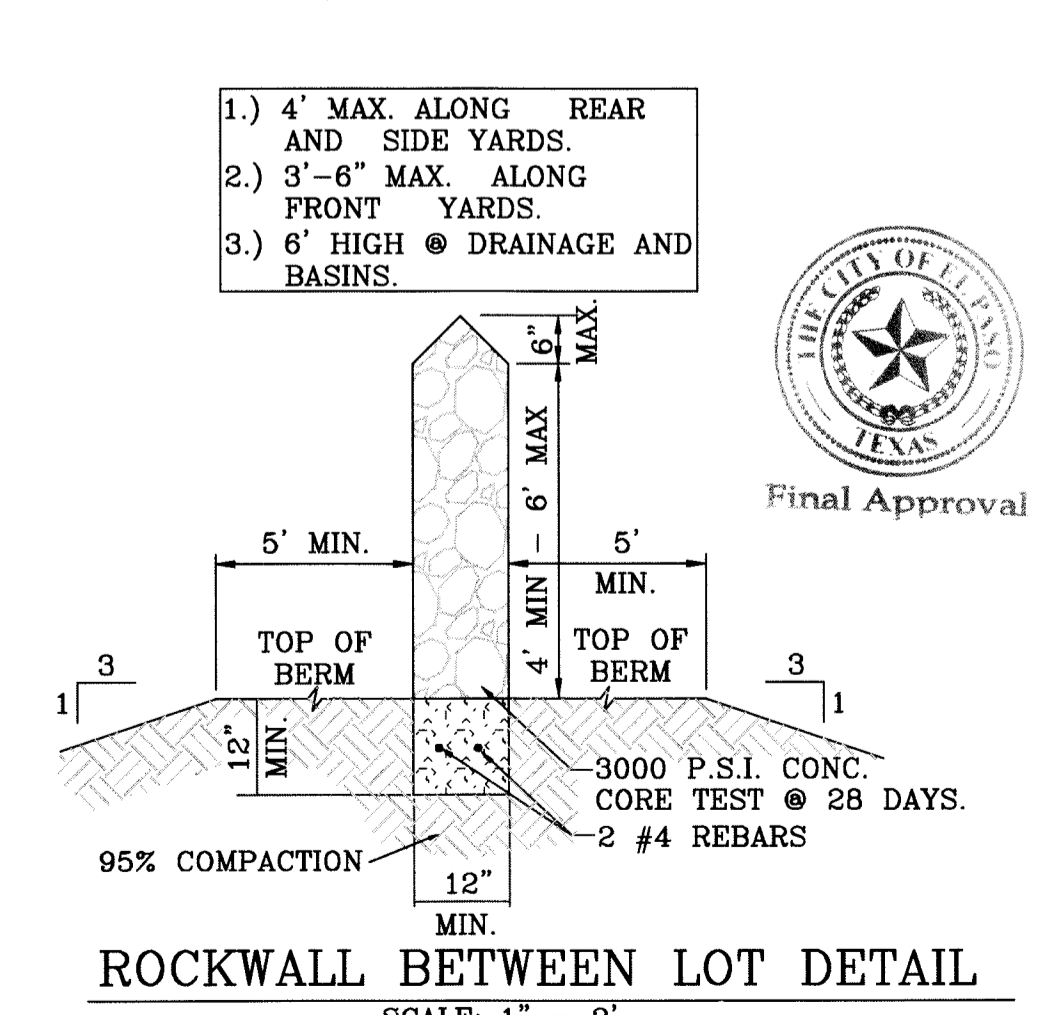
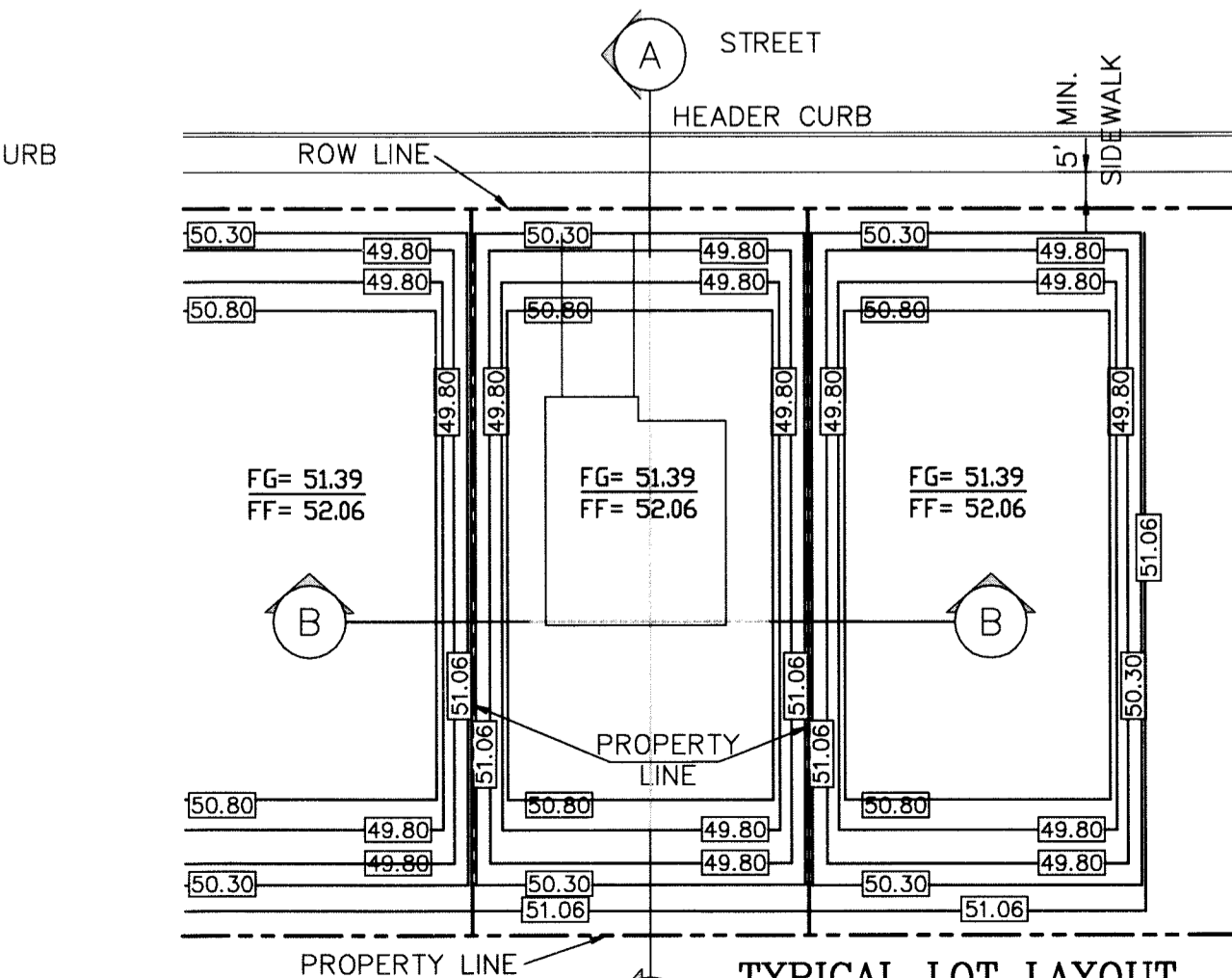
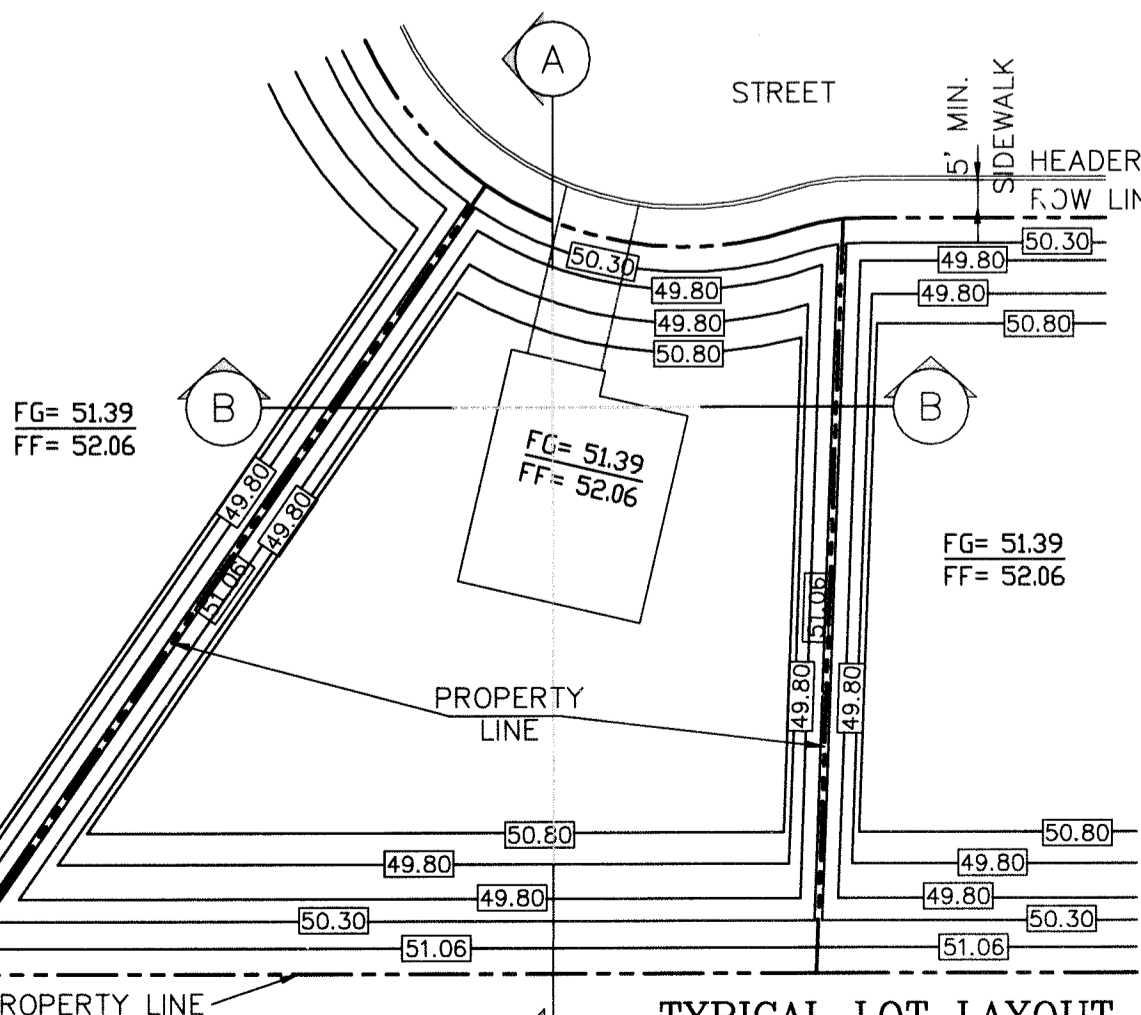
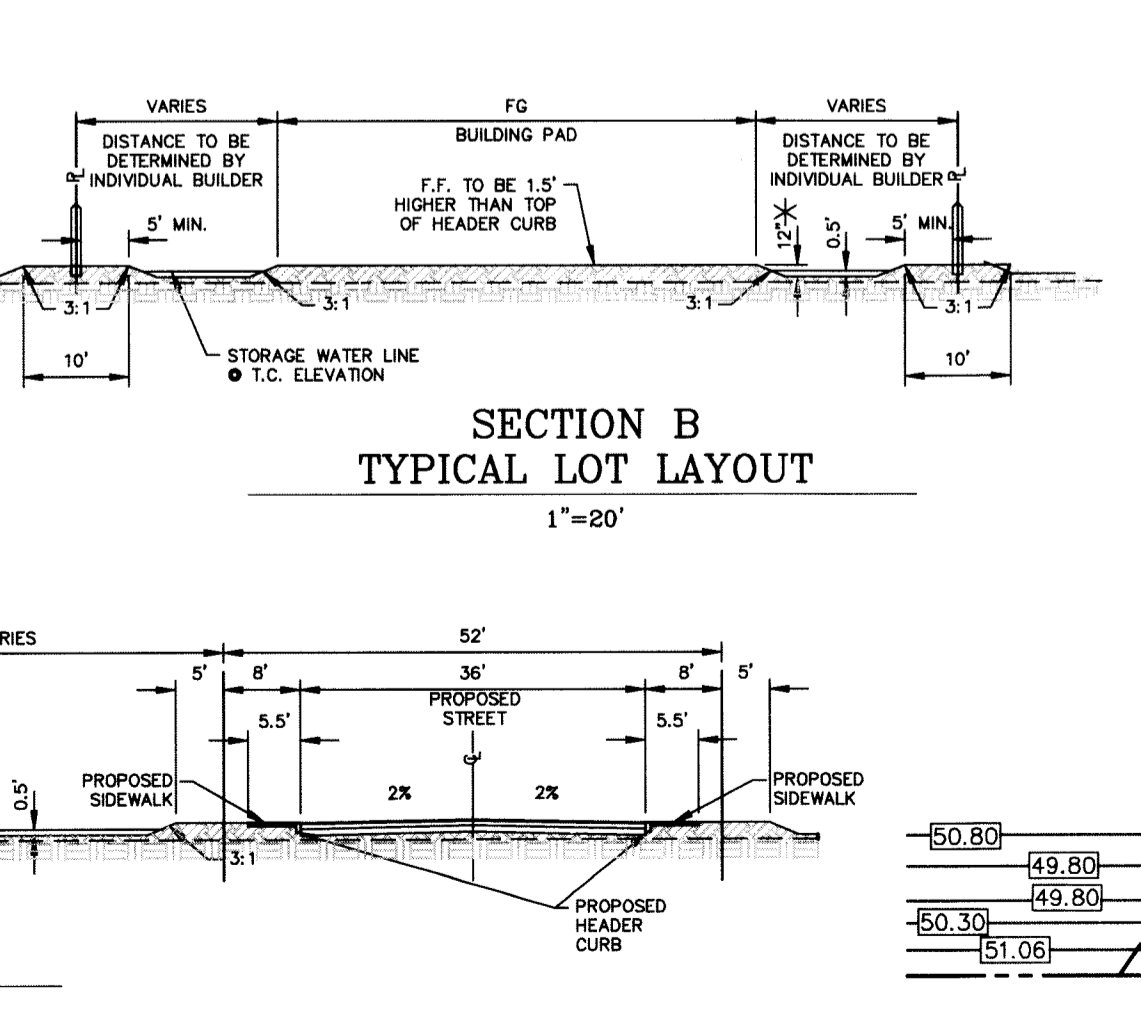
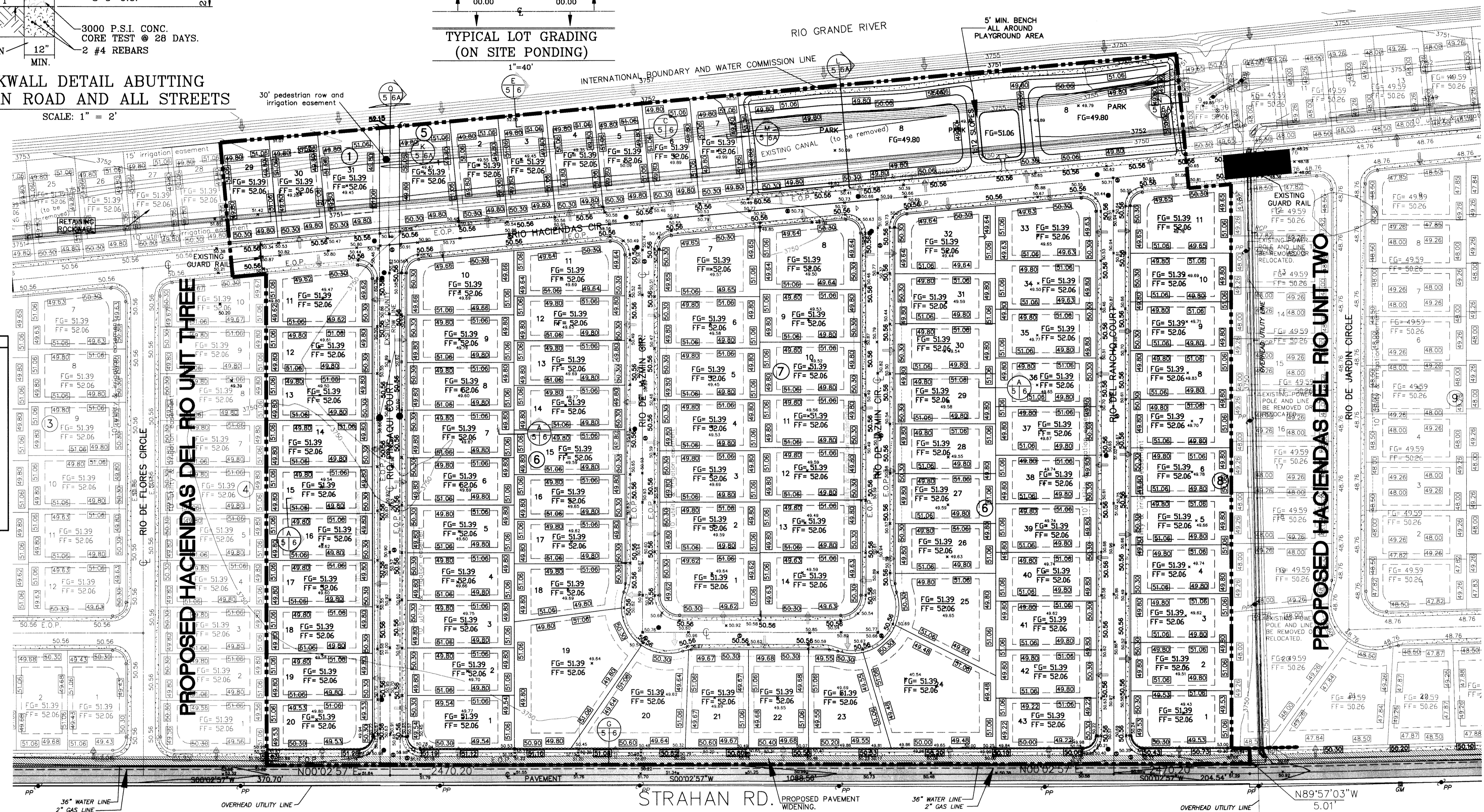
ROCKWALL DETAIL ABUTTING STRAHAN ROAD AND ALL STREETS
SCALE: 1" = 2'



TYPICAL LOT GRADING (ON SITE PONDING)
SCALE: 1" = 40'



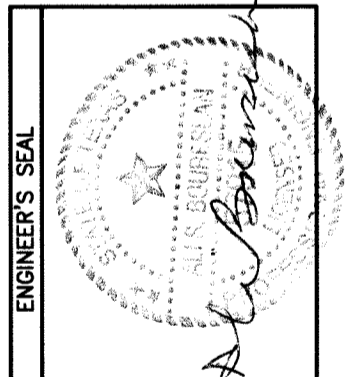
- CONSTRUCTION NOTES:**
1. ALL CONCRETE FOR STRUCTURES SHALL BE 3000 PSI. UNLESS OTHERWISE NOTED.
 2. MINIMUM COVER FOR REINFORCING STEEL SHALL BE 2" UNLESS OTHERWISE NOTED.
 3. 95% COMPACTION REQUIRED FOR STRUCTURES AS PER ASTM D1557.
 4. REINFORCING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60.



TOPOGRAPHY AS PER ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS.

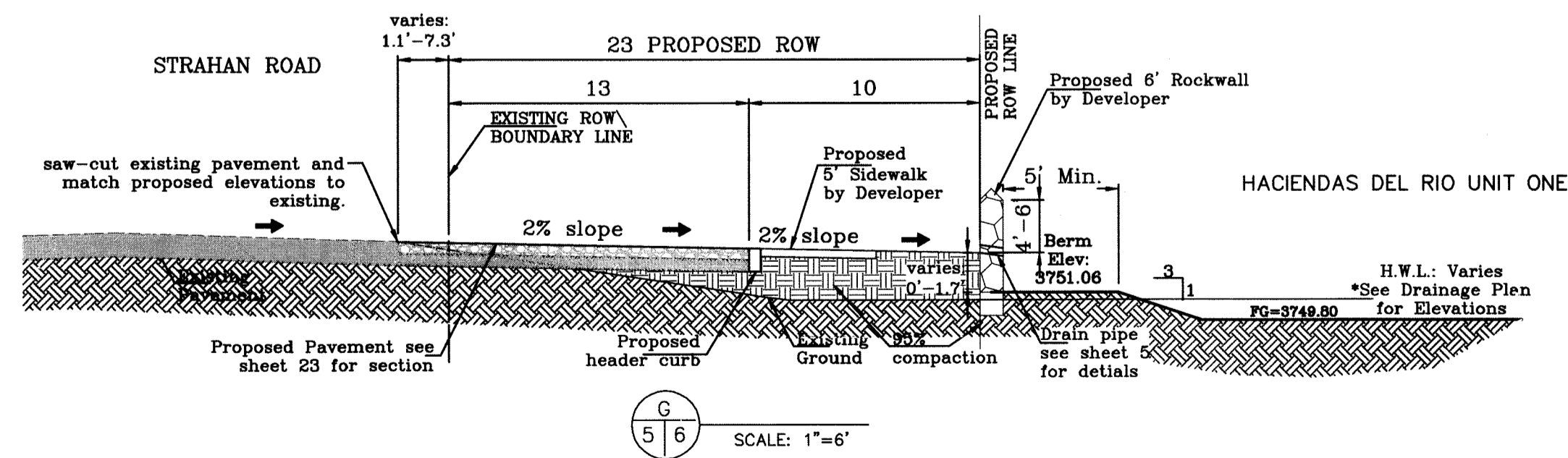
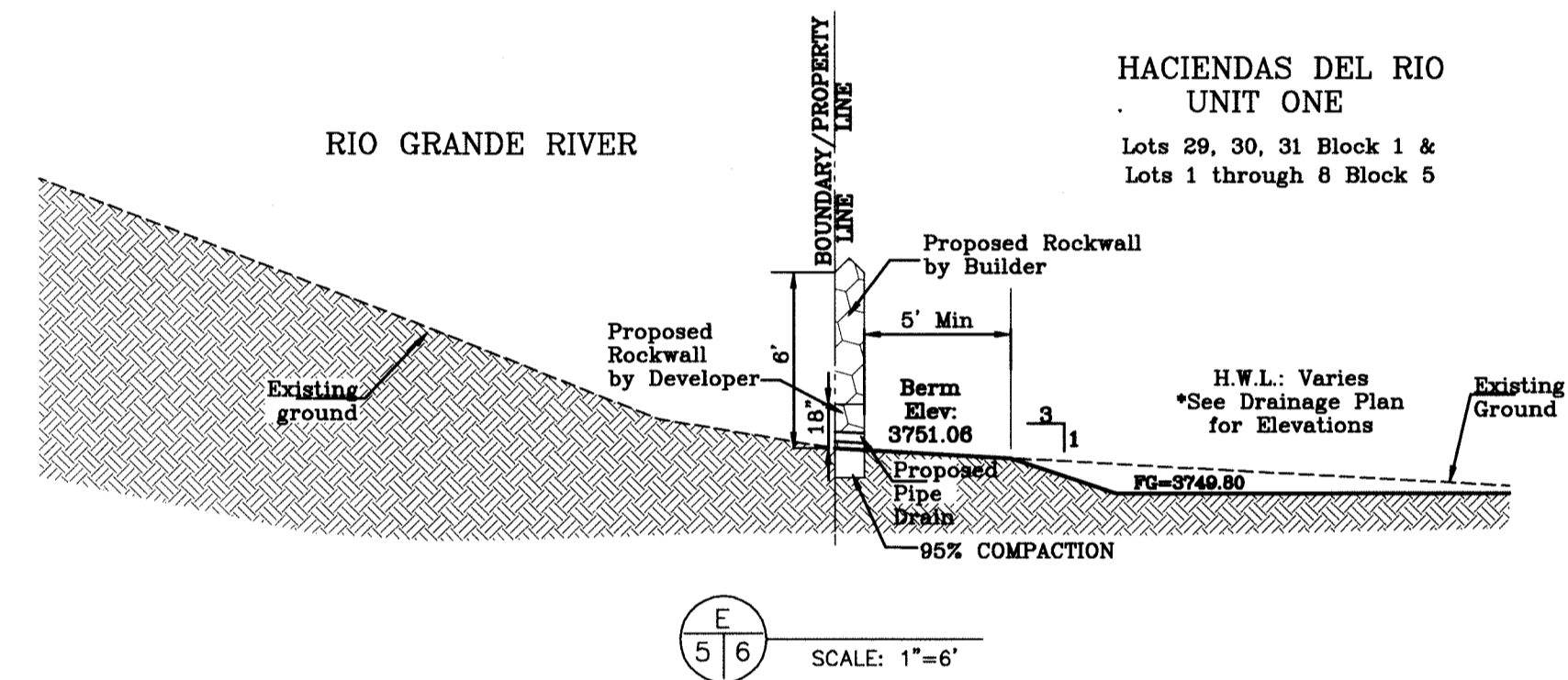
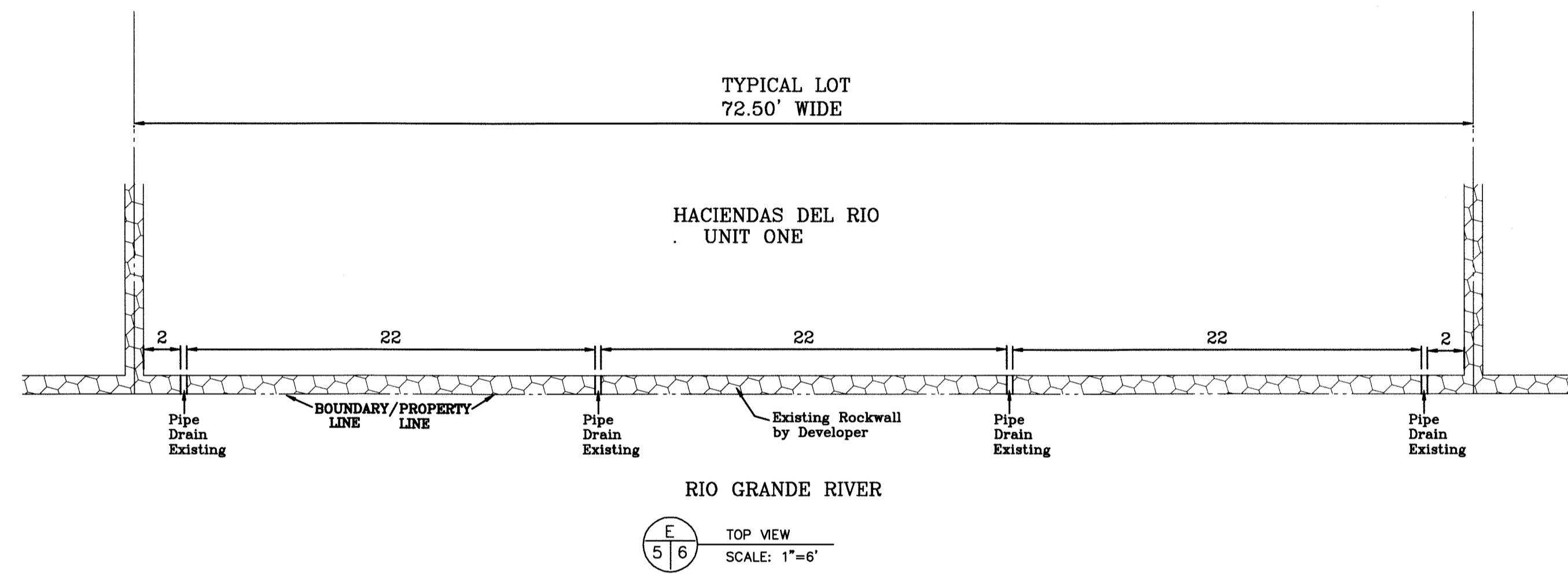
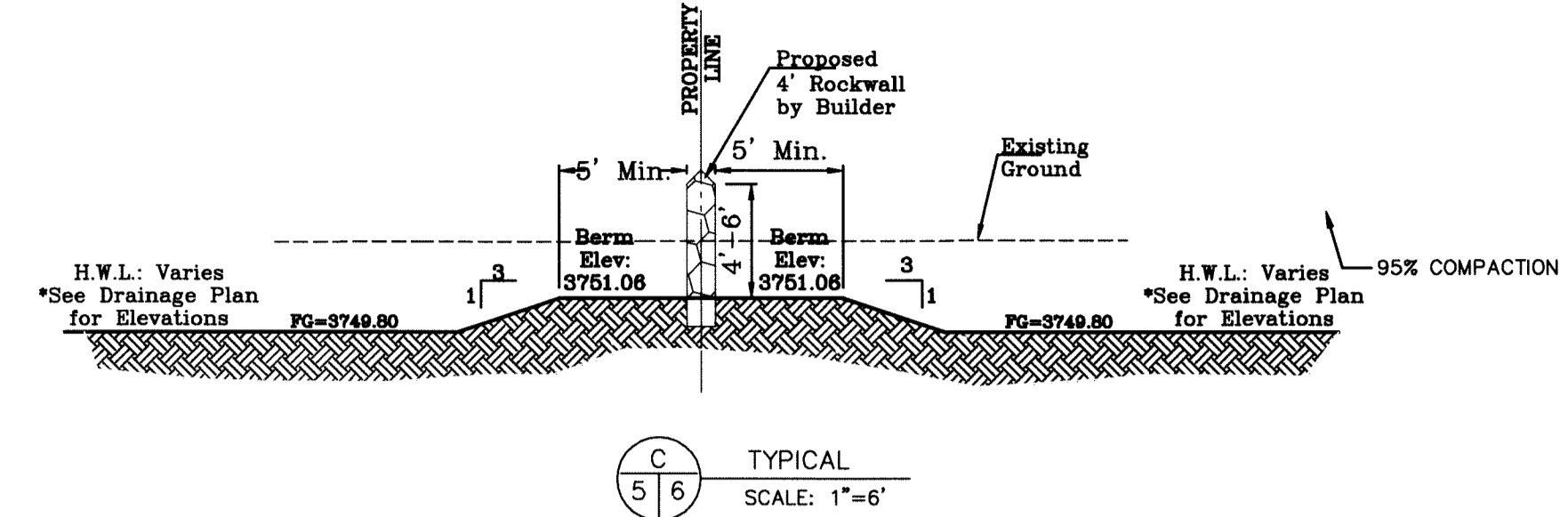
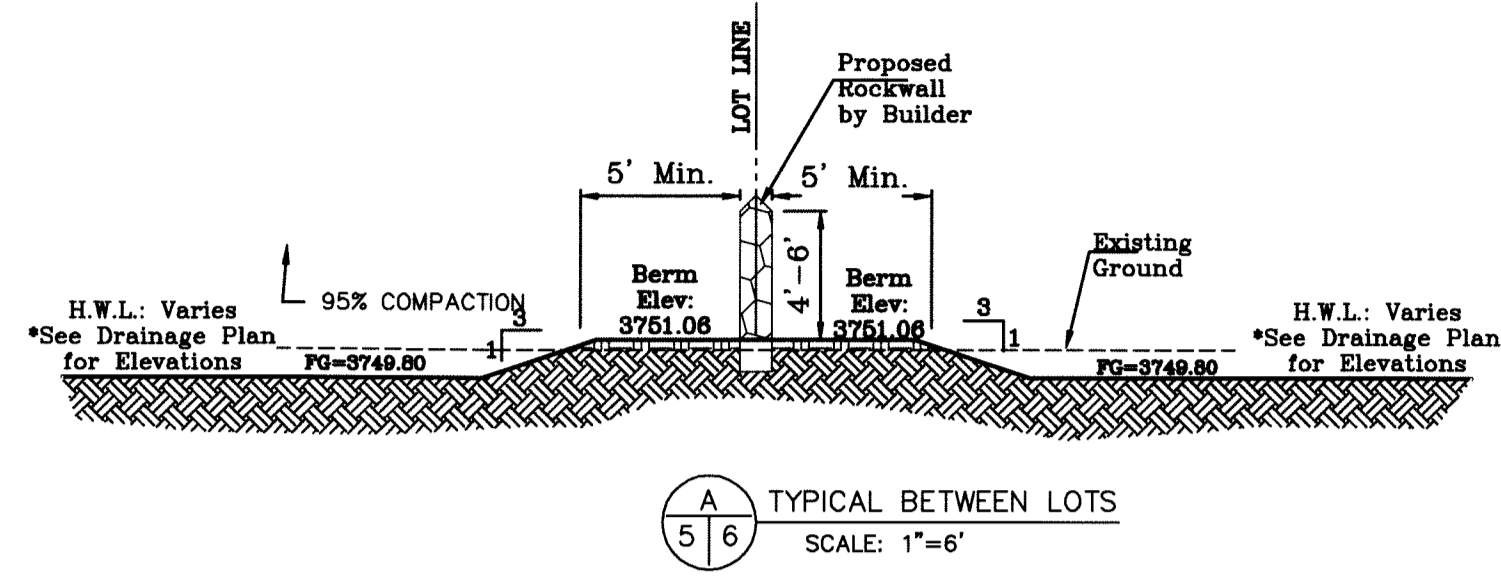
BENCHMARK	
NCS BRASS OR MARKER IN CONCRETE	16.27
EL. OF TOP OF BENCH	49.49
CITY OF EL PASO	37.49.48
EL. OF BENCH	49.49

HACIENDAS DEL RIO UNIT ONE
BEING A PORTION OF TRACTS 3B AND 3D1 AND ALL OF UPPER VALLEY SURVEYS
EL PASO COUNTY, TEXAS
CONTAINING 33.5014 ACRES



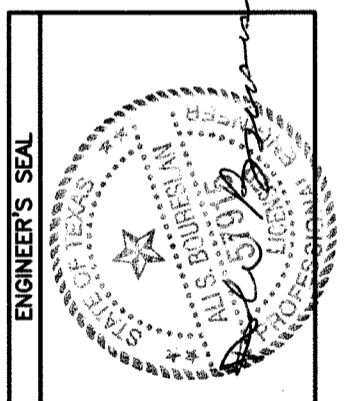
CIVIL ENGINEER
AS ENGINEERING SERVICES
ALI BOULESIAN
P.E. #47915 - FIRM #005017
3615 B. MCGRAY, SUITE A
EL PASO, TEXAS 79906
PH: 481-915-6911

DRAWN BY: EA
CHECKED BY: CJ
PROJECT No. HACIENDAS 1
DATE: JANUARY 12, 2015
SHEET TITLE: GRADING PLAN
SHEET: C-5
PAGE: 5 OF 24



BENCHMARK	
NCS BRASS CAP MARKER IN CONCRETE 1/2" WITH	
ELEVATION 3750.37, NAD83	
CITY OF EL PASO ELEVATION 3749.48	

HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 3B AND 3D AND ALL OF
 TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 16
 UPPER VALLEY SURVEYS
 EL PASO COUNTY, TEXAS
 CONTAINING 33.5014 ACRES



CIVIL ENGINEER
AS ENGINEERING SERVICES
 ALI BOURSILIAN
 P.E. #57915 - FIRM #005017
 3616 AGRALIE, SUITE A
 EL PASO, TEXAS 79905
 PH: 810-591-3312

DRAWN BY: EA
 CHECKED BY: CJ
 PROJECT No. HACIENDAS 1
 DATE: JANUARY 12, 2015

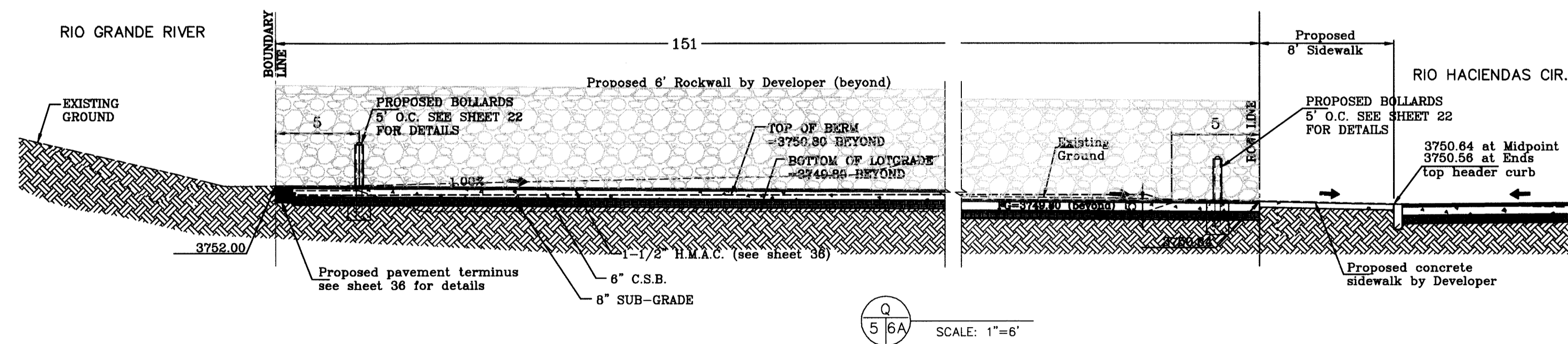
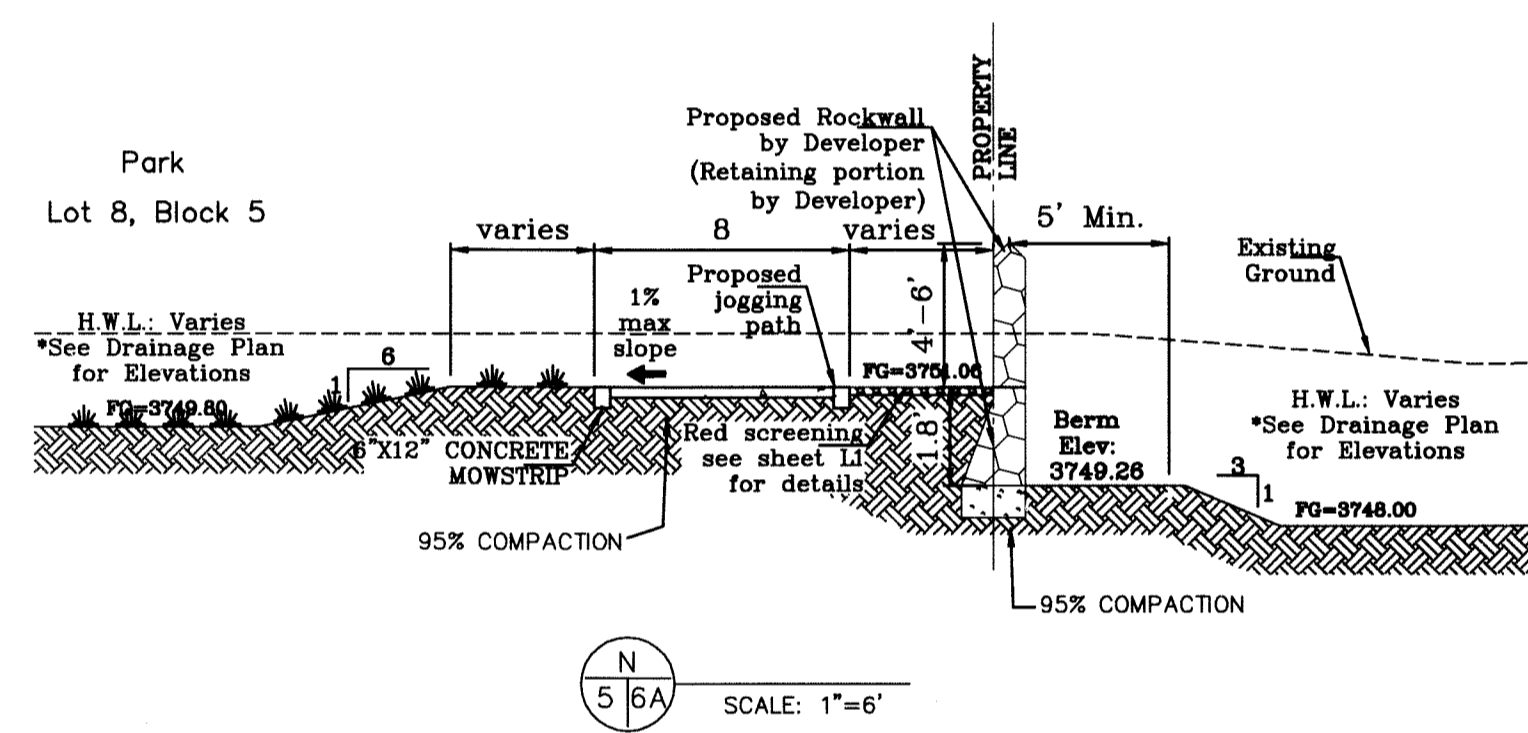
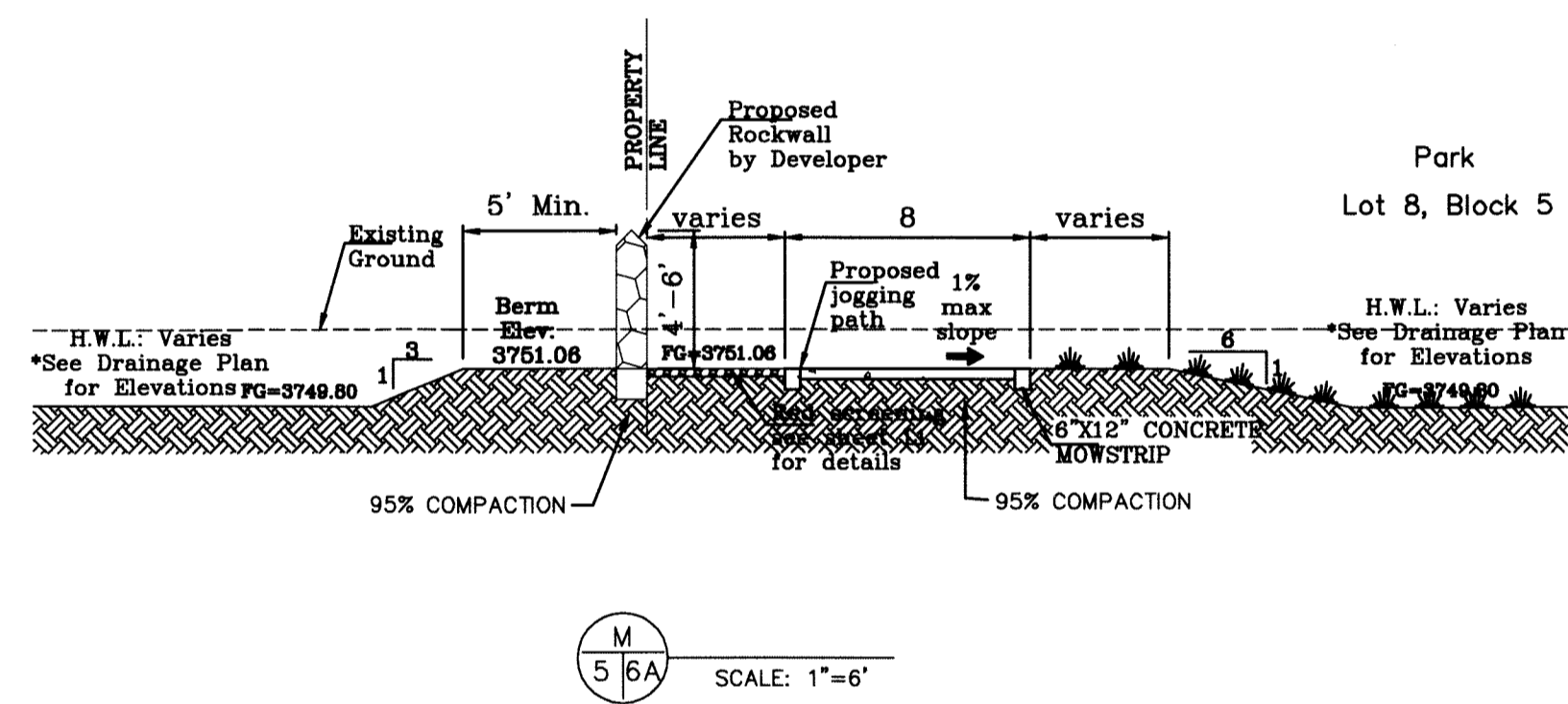
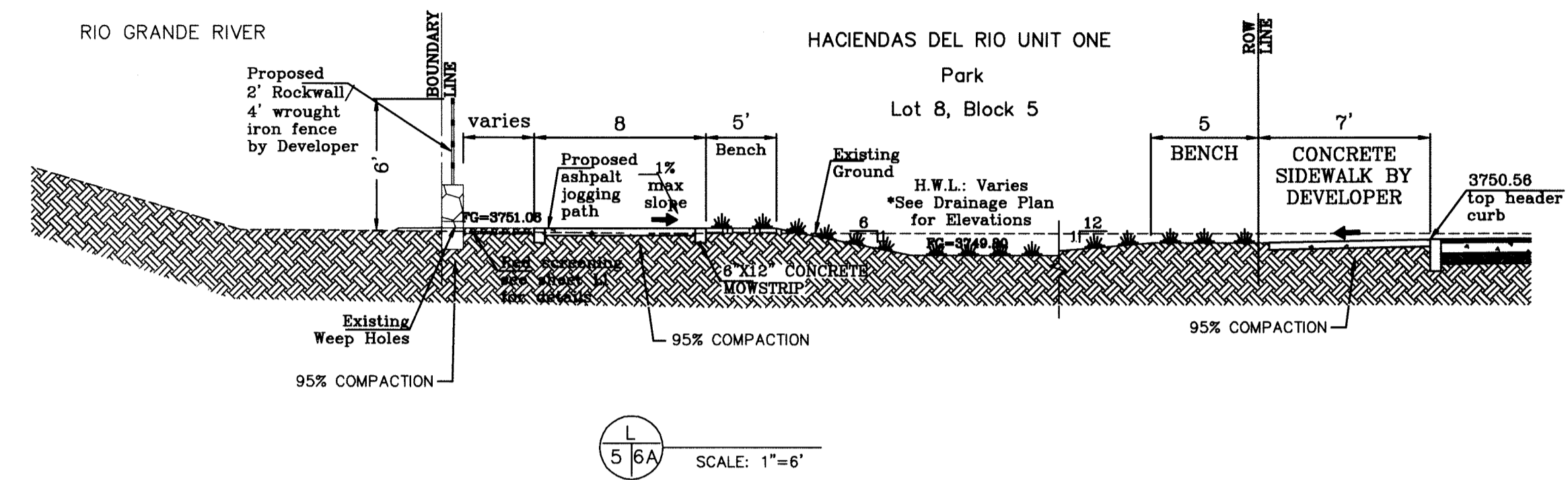
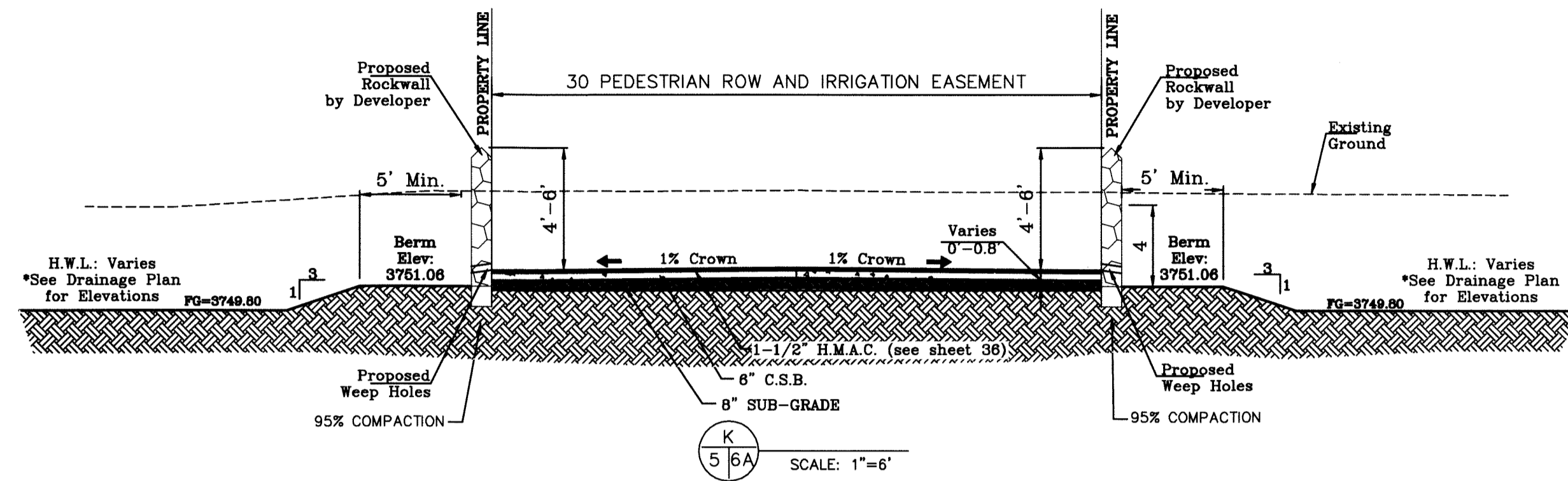
SCALE
 HORIZ: 1"=6'
 VERT: 1"=6'

SHEET TITLE:
GRADING SECTIONS

PAGE: 6
 OF: 24

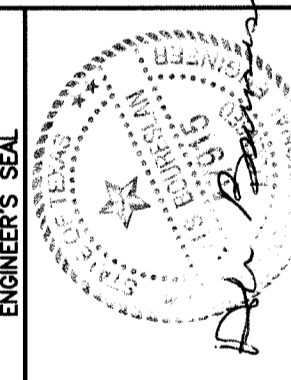


Final Approval



BENCHMARK:
NIS BRASS CAP MARKER IN CONCRETE 1'-27" WITH
ELEV.=3759.37, NAD83, CITY OF EL PASO, TEXAS
ELEV.=3748.48'

HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 3B AND 3D1 AND ALL OF
 TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 16
 UPPER VALLEY SURVEYS
 EL PASO COUNTY, TEXAS
 CONTAINING 33.5014 ACRES



CIVIL ENGINEER
4S ENGINEERING SERVICES
 ALLI BOURLESLAN
 P.E. #57915 - FIRM#005017
 3816 MCGRAE, SUITE A
 EL PASO, TEXAS 79925
 PH#935-921-3515

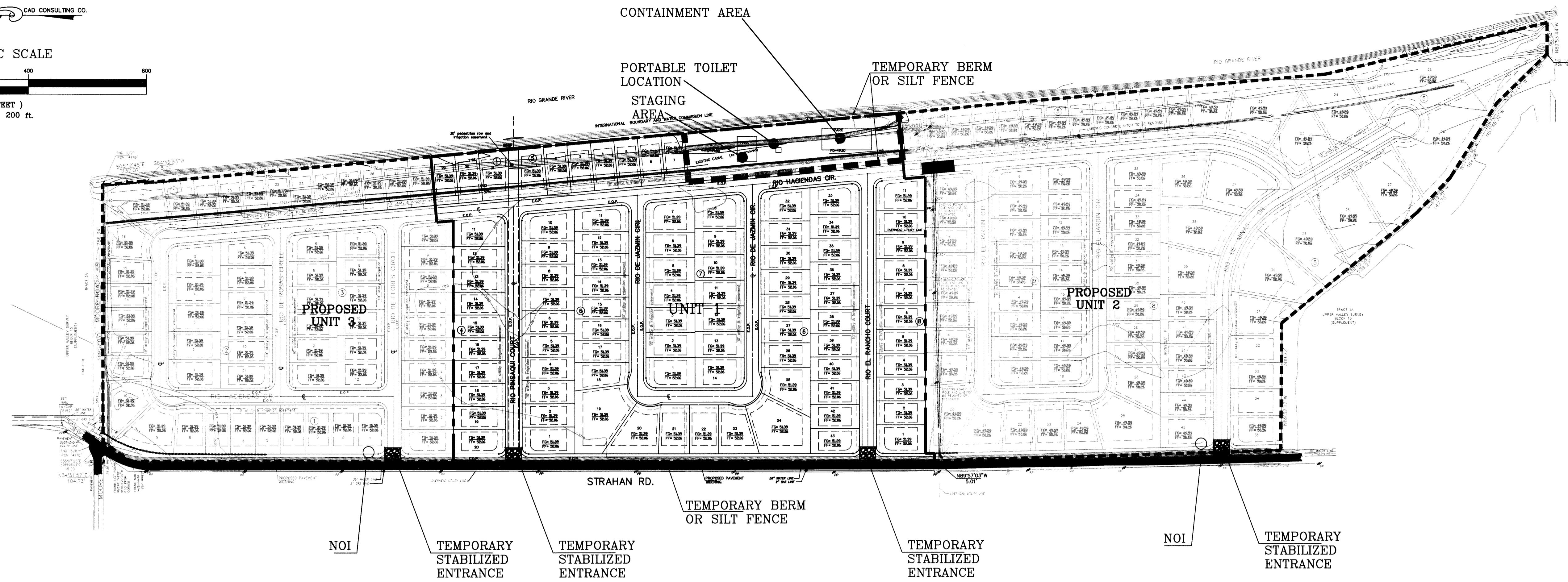
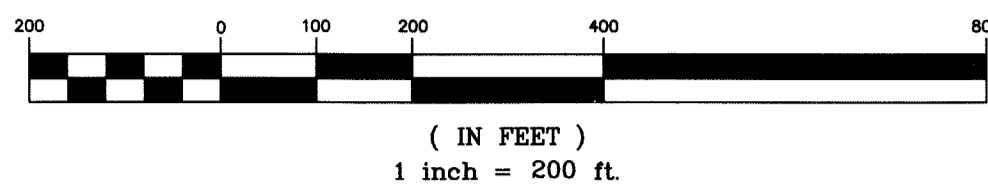
DRAWN BY: EA
 CHECKED BY: CU
 PROJECT No. HACIENDAS 1
 DATE: JANUARY 12, 2015

SCALE
 HORIZ: 1"=6'
 VERT: 1"=6'

SHEET TITLE:
GRADING SECTIONS

PAGE: 6A
 OF: 24

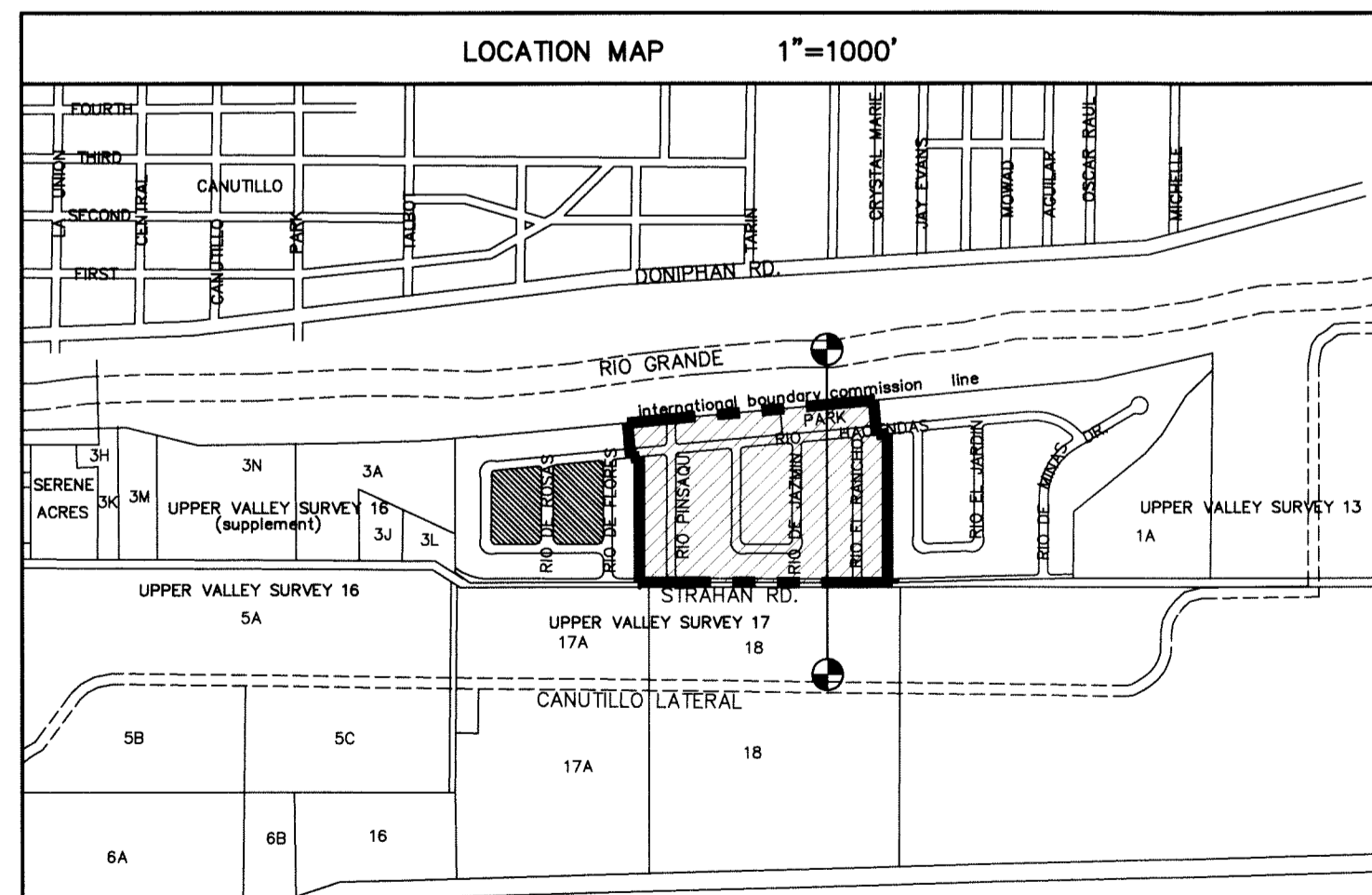




BENCHMARK: NASS BRASS CAP 1/2" DIA. LUMINOUS PLATE 108.35 857
LATITUDE 96 31 13.44' N LONGITUDE 108 35 857
ELEVATION 5789.37 NAVD83 CITY OF EL PASO ELEVATION 5749.48'

HACIENDAS DEL RIO UNIT ONE
BEING A PORTION OF TRACTS 38 AND 3D1 AND ALL OF TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 16
UPPER VALLEY SURVEYS
EL PASO COUNTY, TEXAS
CONTAINING 83.5014 ACRES

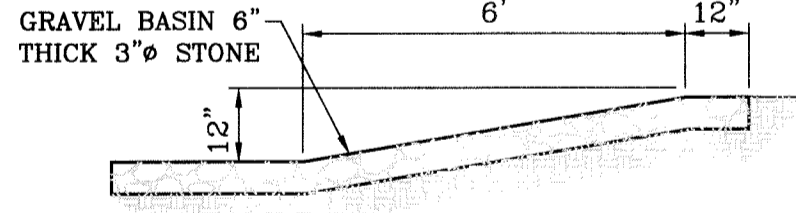
6/5/15
A. L. BOURSEMAN, INC.



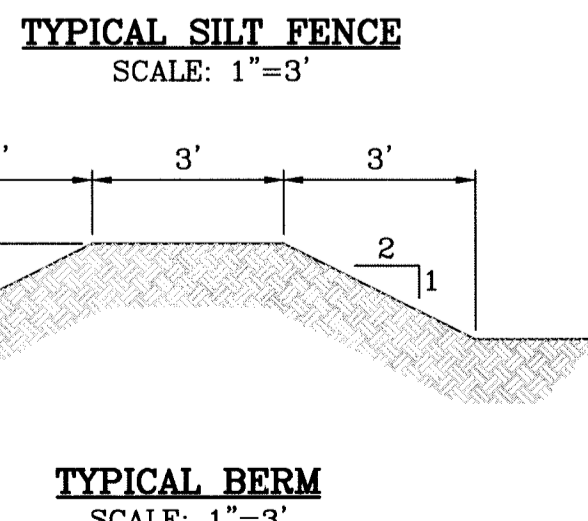
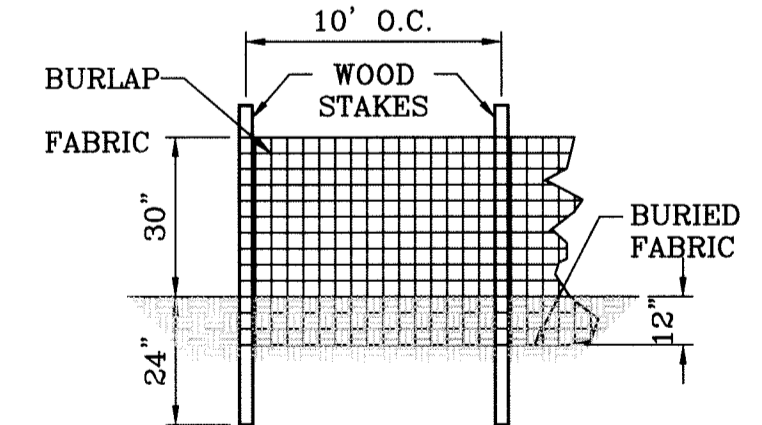
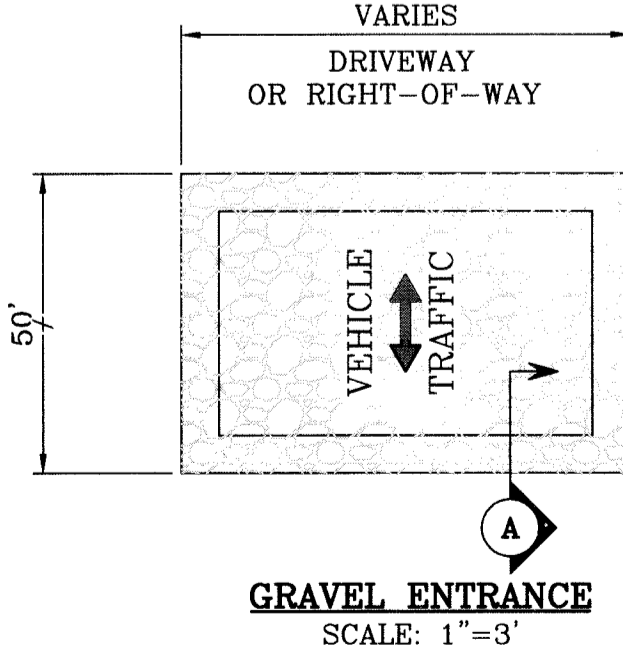
SILT FENCE TO BE INSTALLED AND MAINTAINED ALONG THE PERIMETER OF THE PARK SITE UNTIL ALL ABUTTING RESIDENCES ARE DEVELOPED.

- NOTES:**
1. T.P.D.E.S PERMIT- AS REQUIRED BY CONTRACTOR
 2. STORM WATER AS PER N.P.D.E.S PERMIT

- STABILIZED ENTRANCE EROSION CONTROL NOTES**
1. SILT FENCING OR TEMPORARY BERMS SHALL BE INSTALLED AT TIME OF CONSTRUCTION.
 2. TEMPORARY SWALES AND DESILTING BASINS WILL BE PLACED WHERE NECESSARY IN ORDER TO CONVEY STORM WATER RUN-OFF.
 3. A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEPED WEEKLY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE.
 4. THE OWNER SHALL BE RESPONSIBLE FOR INSURING THAT ALL EROSION CONTROL METHODS ARE INSPECTED ON A MONTHLY BASIS OR AFTER EVERY ERODIBLE RAINFALL (1/2" OR MORE). ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL SHALL BE MADE AT THE TIME.
 5. A TEMPORARY BERM SHALL BE PROVIDED AT THE TOE OF SLOPE AND LOT LINE AT TIME OF GRADING PRIOR TO ROCKWALL CONSTRUCTION.



SECTION A
EROSION AND SEDIMENT CONTROLS
TEMPORARY STABILIZATION
SCALE: 1"=3'



LEGEND

FF=00.67	PROPOSED FINISH GROUND AND FINISH FLOOR
FG=00.00	PROPOSED SPOT ELEVATION
00.00	HIGH POINT
4000	LOW POINT
4000	EXISTING CONTOUR
4000	EXISTING SPOT ELEVATION
4000	PROPOSED CONTOUR
(---)	PROPOSED ROCK WALL
(---)	PROPOSED RETAINING WALL
(---)	PROPOSED SILT FENCE
(---)	LIMITS OF UNIT ONE
Q	RUN-OFF QUANTITY (CUBIC Ft./Sec)
A	WATERSHED AREA (ACRES)
(---)	DRAINAGE FLOW

TOPOGRAPHY AS PER ROBERT SEIPEL ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS.



ENGINEER'S SEAL
A. L. BOURSEMAN, INC.
CIVIL ENGINEER
45 ENGINEERING SERVICES
ALL BOURSEMAN P.E.#57915 - FIRM#065017
301 W. PASO, SUITE A
EL PASO, TEXAS 79926
PH#915-691-3312

DRAWN BY: EA
CHECKED BY: CJ
PROJECT No. HACIENDAS 1
DATE: JANUARY 12, 2015
SHEET TITLE: STORM WATER POLLUTION PREVENTION PLAN
SHEET: C-8
PAGE: 8
OF: 24

SITE DESCRIPTION: RESIDENTIAL SUBDIVISION

1. NO ASPHALT BATCH PLANTS FOR THIS SITE.

BEST MANAGEMENT PRACTICES

- 1. STRUCTURAL CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT IN EFFECTIVE OPERATING CONDITION.
2. DOCUMENTATION OF MAINTENANCE ACTIVITIES INCLUDING FREQUENCY, LOT DESIGNATION, INSPECTION OF: STRUCTURAL CONTROLS, MATERIAL STORAGE AREAS, VEHICLES ENTRANCE AND EXITS; ACTIONS TAKEN AND INSPECTORS NAME.
3. CONSTRUCTION SITE NOTICE WILL BE MAINTAINED ON SITE.
4. COPY OF SWPPP SHALL BE KEPT ON SITE.
5. PERMITTEE MUST RETAIN THE SWP3, NOI AND INSPECTION LOG FOR A MINIMUM OF THREE YEARS FROM TERMINATION AND FINAL STABILIZATION OF PROJECT.

I. WASTE MATERIALS

ALL WASTE MATERIALS, INCLUDING CONSTRUCTION DEBRIS, SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. NO CONSTRUCTION MATERIAL SHALL BE BURIED ON SITE. THE DUMPSTER SHALL BE EMPTIED AS NECESSARY OR AS REQUIRED BY ORDINANCE 9.04 (SOLID WASTE MANAGEMENT) AND THE TRASH BE HAULED TO A LICENSED LANDFILL.

II. HAZARDOUS WASTE

HAZARDOUS: PAINT, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SPILL STABILIZATIONS, CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION AND CONTACT THE FIRE DEPT. AND NMED.

III. SANITARY WASTE

ALL SANITARY WASTE SHALL BE COLLECTED FROM THE CONSTRUCTION PORTABLE UNITS AS NECESSARY BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

IV. SPILL PREVENTION

THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURES OF MATERIALS TO STORM WATER RUNOFF.

A. GOOD HOUSEKEEPING

- A. STORE ONLY ENOUGH PRODUCTS REQUIRED TO DO THE JOB.
B. NEATLY STORE MATERIALS ON-SITE IN AN ORDERLY MANNER.
C. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER.
D. DO NOT MIX SUBSTANCES WITH ONE ANOTHER, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER.
E. USE ENTIRE CONTENTS OF A PRODUCT BEFORE DISPOSING THE CONTAINER.
F. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL.

B. HAZARDOUS PRODUCTS:

- PRACTICES USED TO REDUCE RISKS:
A. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER IF AT ALL POSSIBLE
B. RETAIN ORIGINAL LABELS, PRODUCT INFORMATION AND MATERIAL SAFETY DATA SHEETS (MSDS)
C. DISPOSE SURPLUS PRODUCT IN ACCORDANCE WITH MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS

C. PETROLEUM PRODUCTS:

PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

V. SPILL CONTROL PRACTICES:

- A. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES.
B. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE.
C. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
D. SPILL AREA SHALL BE WELL VENTILATED AND APPROPRIATE CLOTHING WILL BE WORN.
E. ANY SPILL SHALL BE REPORTED TO THE APPROPRIATE GOVERNMENTAL AGENCY.
F. MEASURES SHALL BE TAKEN TO PREVENT A SPILL FROM REOCCURRING

VI. MAINTENANCE AND INSPECTION PROCEDURES

ALL POLLUTION PREVENTION MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY 14 DAYS AND FOLLOWING A STORM EVENT OF 0.5 INCHES OR MORE. BEST MANAGEMENT PRACTICES AND POLLUTION CONTROL PROCEDURES SHALL BE INSPECTED FOR ADEQUACY. A RECORD OF THE RESULTS OF THE INSPECTIONS OF THE SITE SHALL BE KEPT ON SITE.

VII. REMARKS

DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS.

INTERIM STABILIZATION MEASURES ARE AS FOLLOWS: PERIMETER SILT FENCE, TEMPORARY EARTHEN BERMS, TEMPORARY STABILIZED CONSTRUCTION SITE EXIT, TEMPORARY DESILTING BASINS

FINAL STABILIZATION WILL BE PERFORMED BY THE HOME BUILDERS WHICH WILL CONSTRUCT A SINGLE BUILDING ON EACH LOT AND PLACE LANDSCAPING ON EXPOSED SURFACES.

THE RECEIVING WATERS ARE ON SITE PONDING

STORM WATER SAMPLING DATA IS NOT AVAILABLE FOR THIS SITE.

NO CONCRETE OR BATCH PLANTS ON THIS SITE.

NO APPARENT ENDANGERED SPECIES ON SITE. NO HISTORIC PROPERTIES ON SITE.

STORM WATER CONTAMINANTS ON SITE

THE FOLLOWING ARE THE POTENTIAL STORM WATER POLLUTANTS (CHECKED ITEMS ONLY):
CLEANING SOLVENTS EQUIP. CLEANING WASTEWATER
ASPHALT X HYDRAULIC OIL/FLUIDS X
CONCRETE X GASOLINE X
PAINTS X DIESEL FUEL X
CURING COMPOUNDS X ANTIFREEZE/COOLANT X

THE CONTAINMENT AREA FOR THESE ITEMS IS LOCATED: AS SHOWN ON PLAN

THE STAGING AREA FOR THIS SITE IS LOCATED: AS SHOWN ON PLAN

THE PORTABLE TOILET FOR THIS SITE IS LOCATED: AS SHOWN ON PLAN

NON STORM WATER DISCHARGES ON SITE (CHECKED ITEMS ONLY).
FIRE HYDRANT FLUSHING X WATER LINE FLUSHING WATER X
VEHICLE WASH WATER X LANDSCAPE IRRIGATION X
DUST CONTROL WATER X PAVEMENT WASH WATERS X

ALL STAGING AREAS, PORTABLE TOILETS AND POLLUTANT AREAS WILL INCORPORATE SECONDARY CONTAINMENT MEASURES SUCH AS BERMS OR SEDIMENT TRAPS/BARRIERS.

CONSTRUCTION ACTIVITIES LOG table with columns: ACTIVITIES, DATE, SIGNATURE

STORM WATER POLLUTION PREVENTION PLAN

GENERAL CONTRACTOR CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT THAT AUTHORIZES STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

SIGNED: _____ COMPANY: _____
ADDRESS: _____
TELEPHONE: _____
DATE: _____
TITLE: PRESIDENT

NARRATIVE- SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

- ESTIMATED BEGINNING CONSTRUCTION DATE: JANUARY 16, 2014
1. BEGIN CONSTRUCTION/MOBILIZATION (5 DAYS)
2. INSTALL INITIAL STORMWATER POLLUTION PREVENTIONS (SWPP) MEASURES AS INDICATED ON SWPP PLAN (7 DAYS)
3. CLEAR AND GRUB 3 DAYS
4. SITE GRADING 30 DAYS
5. PERFORM PERIODIC INSPECTIONS OF THE SWPP STRUCTURES, PERFORM MAINTENANCE AND REPLACEMENTS AS NEEDED (DURATION OF CONSTRUCTION).
6. EXCAVATION FOR SITE UTILITIES 120 DAYS
7. CONSTRUCTION OF SITE IMPROVEMENTS 60 DAYS
8. END CONSTRUCTION - FINAL STABILIZATION, DEMOBILIZATION, REMOVAL OF SWPPP CONTROLS, AND SUBMIT NOTICE OF TERMINATION.
ESTIMATED CONSTRUCTION COMPETION DATE: JANUARY 16, 2015

OWNER CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE, I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OWNER : (SIGNED) _____ DATE _____

OWNER: (NAME) _____

PHONE NUMBER: _____

INSPECTION AND MAINTENANCE REPORT

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWN VIOLATIONS.

SIGNED: _____ DATE: _____

SWPPP COORDINATOR NAME: _____ PHONE NUMBER: _____

LOG OF ACTIVITIES AVAILABLE: SWPPP COORDINATOR
INSPECTION LOG AVAILABLE: SWPPP COORDINATOR
SCHEDULE OF ACTIVITIES AVAILABLE: SWPPP COORDINATOR

SITE DESCRIPTION: RESIDENTIAL SUBDIVISION
THE EXISTING SITE IS FARMLAND. THERE ARE NO SURFACE WATERS ON THE SITE ITSELF OR ADJACENT TO THE SITE. THE SITE DISTURBANCE AREA IS 91.8279 ACRES.

THE SITE MAP SHOWS THE PROPERTY BOUNDARIES WITH THE PROPOSED LOCATION OF THE ROADWAYS, LOTS, THIS SITE WILL BE GRADED AND ROADWAYS PAVED. THE GRADED STREETS WILL DRAIN TO THE GRADED LOTS AS PER ON SITE PONDING.

BENCHMARK:
NMS BRASS CAP MARKER IN CONCRETE Y-27 WITH
UTM COORDINATES OF 1537407.000E 10601353.5748N
ELEVATION: 5755.71 ANGLE: 010.00 DEG. DATE: 02/16/14

HACIENDAS DEL RIO UNIT ONE
BEING A PORTION OF TRACTS 38 AND 301 AND ALL OF TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 18
UPPER VALLEY SURVEY
EL PASO COUNTY, TEXAS
CONTAINING 38.504 ACRES

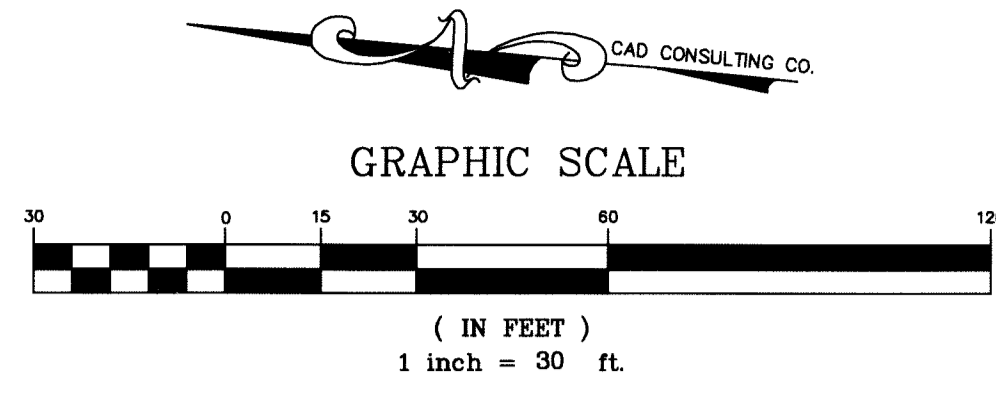
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CIVIL ENGINEER
4S ENGINEERING SERVICES
ALJ BOURGESSIAN
P.E. #57915 - FIRM #005017
3616 MGRAE, SUITE A
EL PASO, TX 79925
PH#915-591-3312

DRAWN BY: CA
CHECKED BY: CJ
PROJECT No. HACIENDAS 1
DATE: JANUARY 12, 2012
SHEET TITLE:

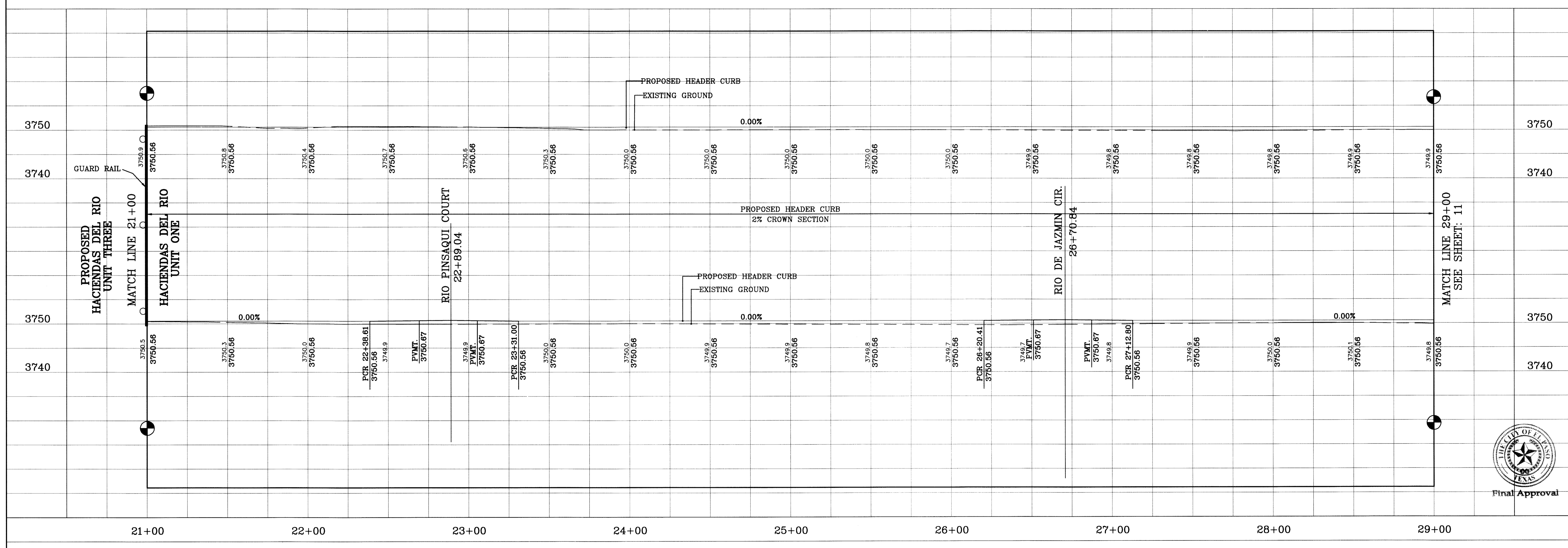
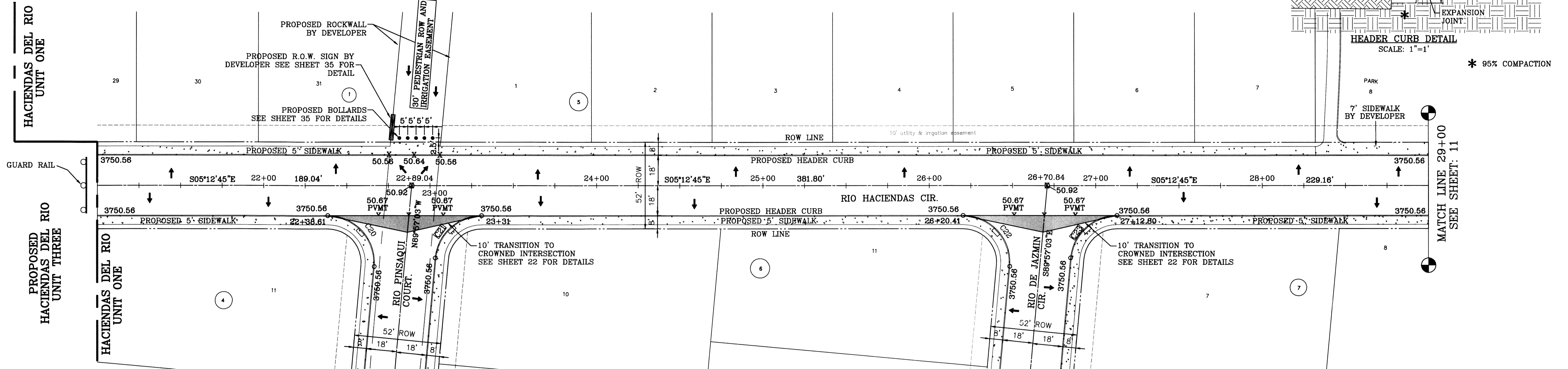
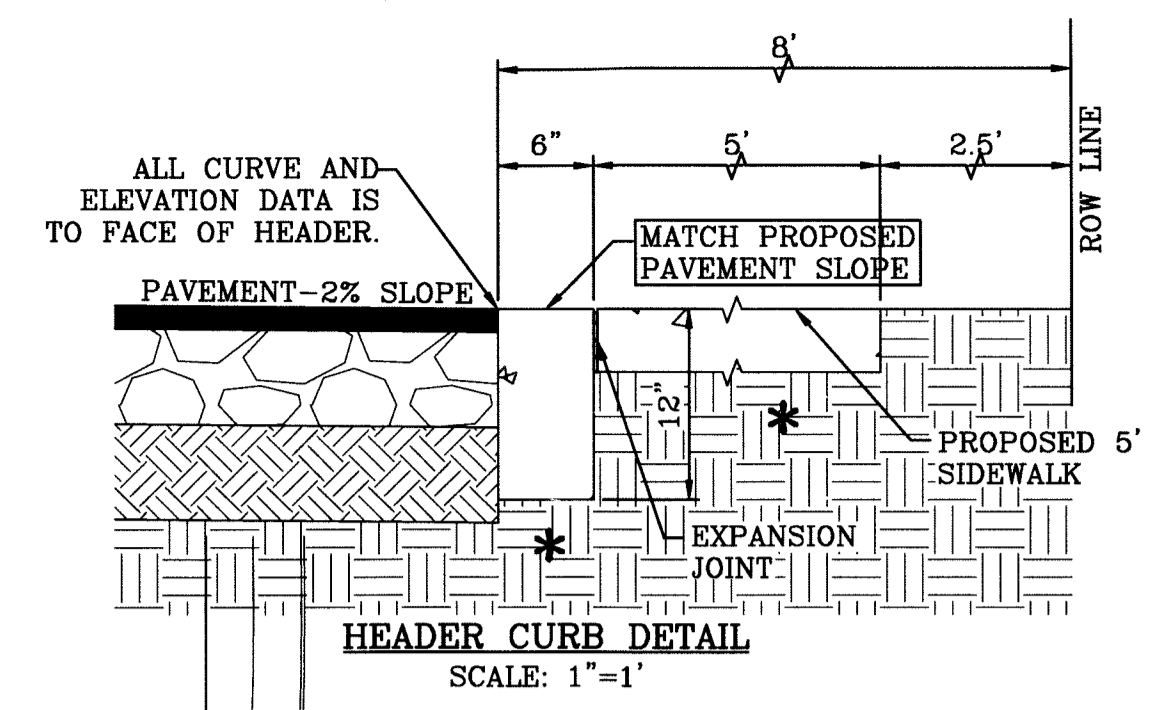
STORM WATER POLLUTION PREVENTION PLAN
PAGE: 9
OF: 24
HACIENDAS DEL RIO



Final Approval

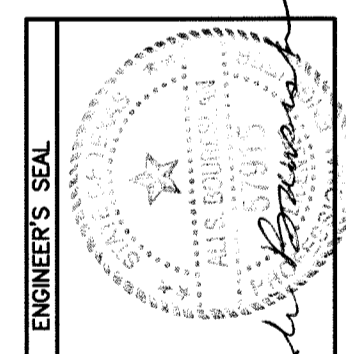


CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C20	28.00'	46.55'	30.70'	41.37'	N42°25'06"E	95°15'42"
C21	28.00'	41.41'	25.54'	37.74'	N47°34'54"W	84°44'18"
C22	28.00'	46.55'	30.70'	41.37'	N42°25'06"E	95°15'42"
C23	28.00'	41.41'	25.54'	37.74'	N47°34'54"W	84°44'18"



BENCHMARK:
NCS BRASS CAP MARKER IN CONCRETE V-27 WITH
LATITUDE OF 31°52'40" LONGITUDE OF 106°33'55"
ELEVATION=5789.37 MWDOR. CITY OF EL PASO ELEV=5749.45

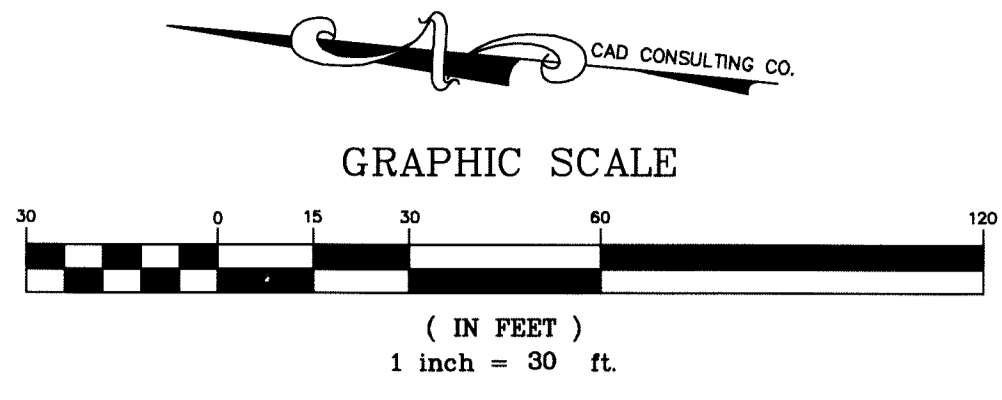
HACIENDAS DEL RIO UNIT ONE
BEING A PORTION OF TRACTS 38 AND 301 AND ALL OF
TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 16
UPPER VALLEY SURVEYS
EL PASO COUNTY, TEXAS
CONTAINING 33.5014 ACRES



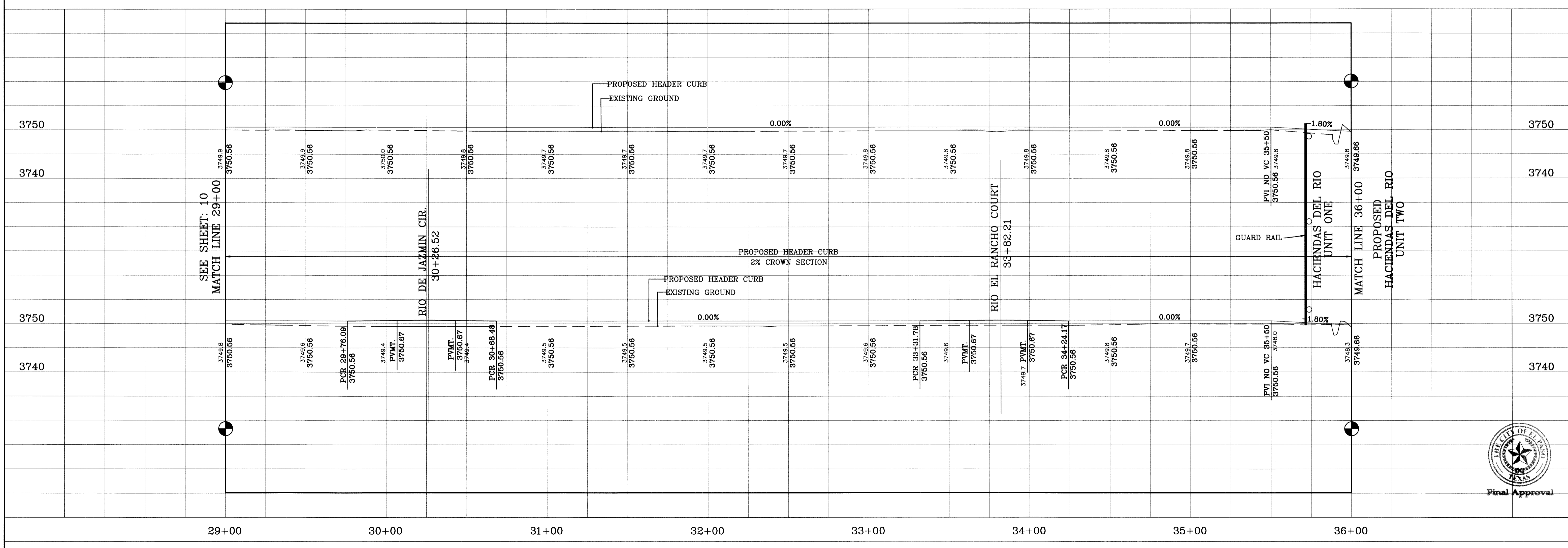
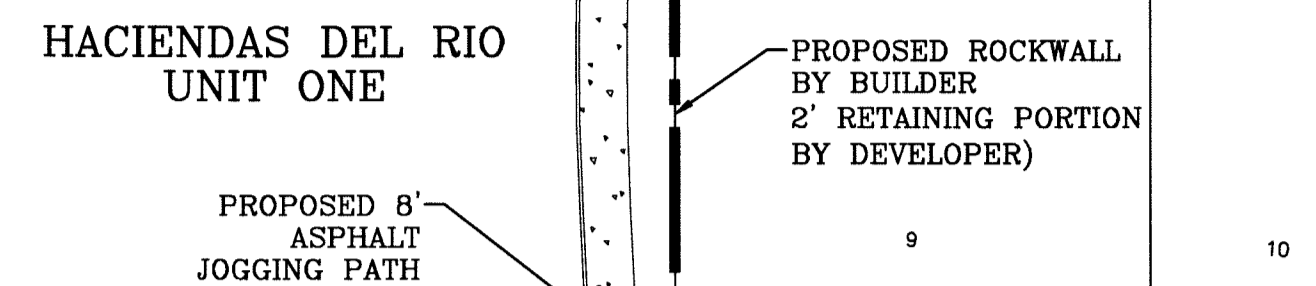
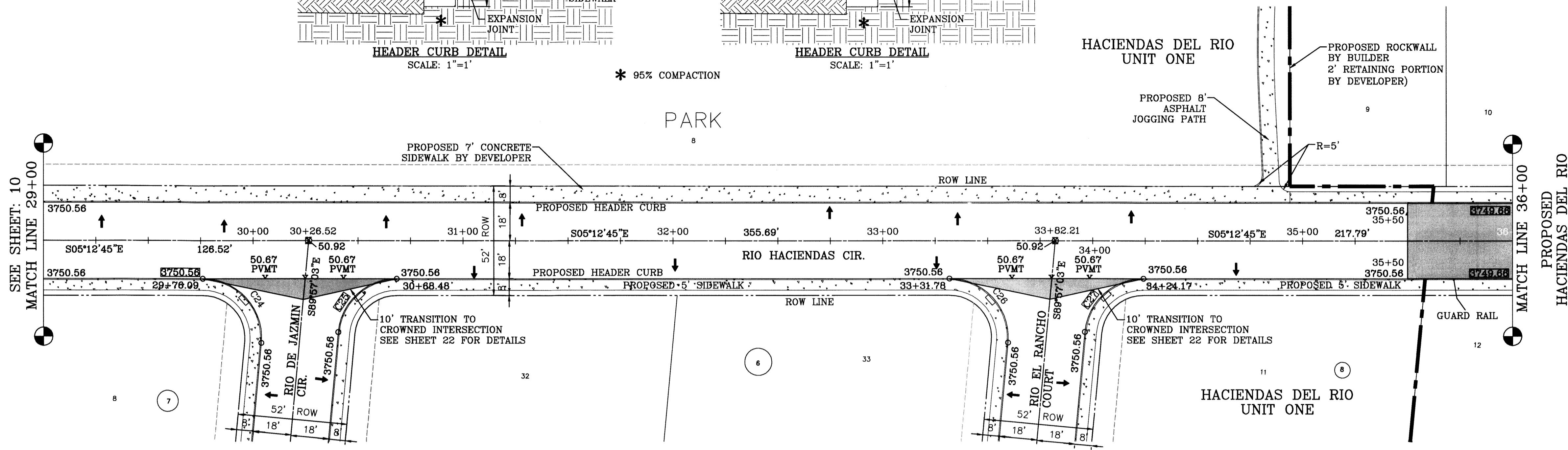
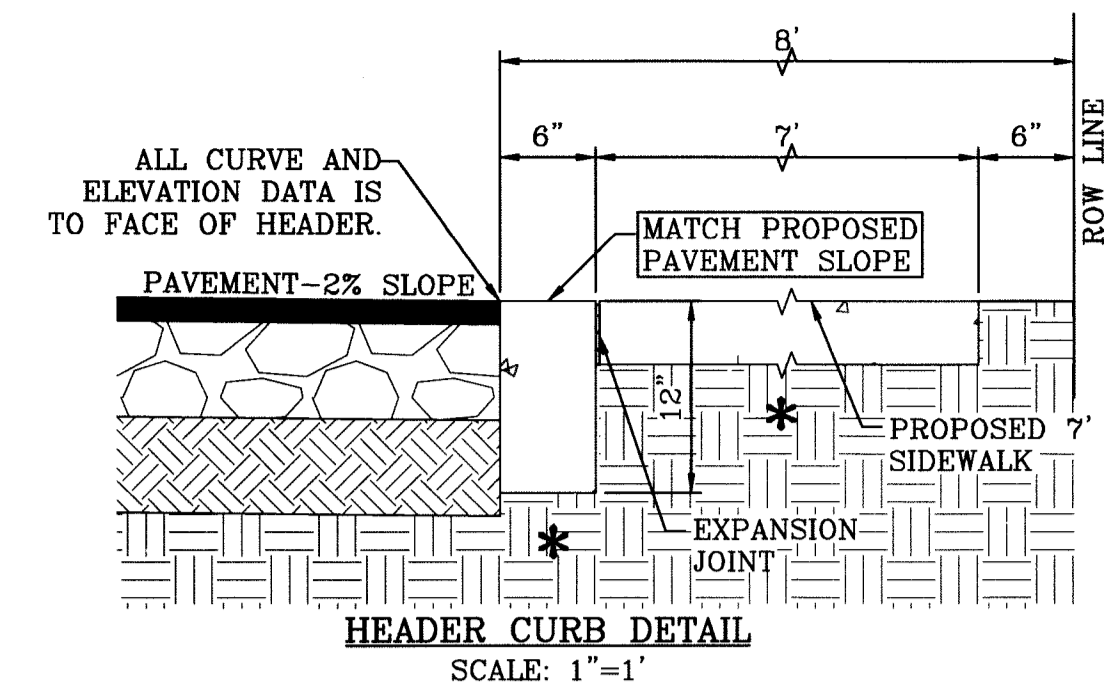
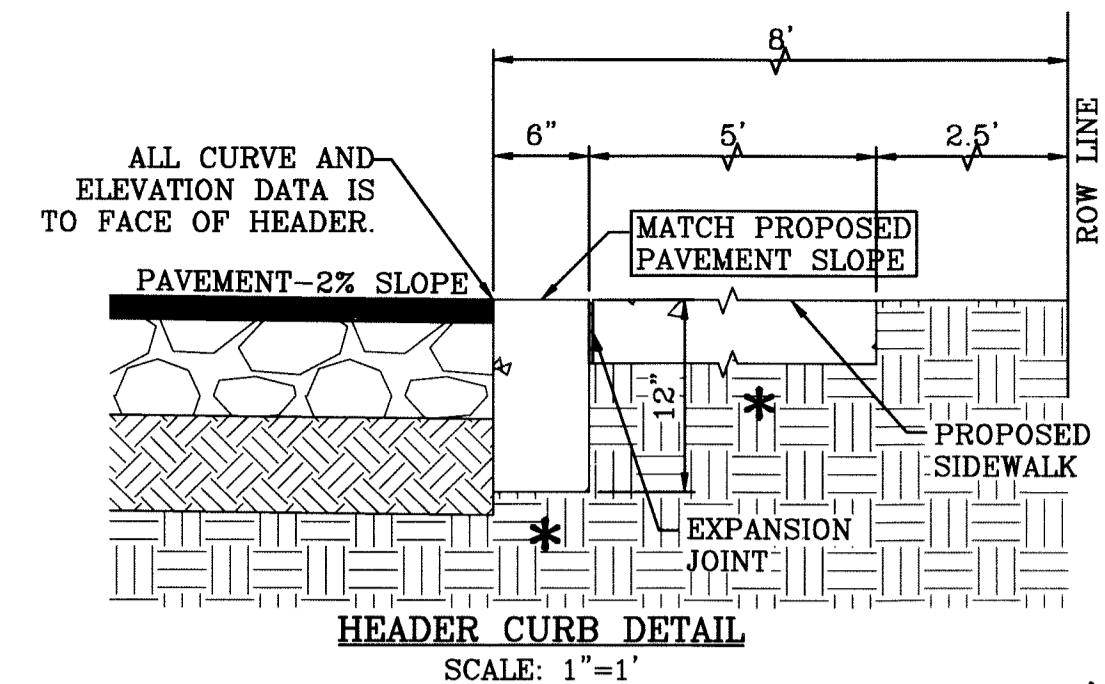
CIVIL ENGINEER
4S SERVICES
ALLIANCE ENGINEERING
P.L.L.C.
P.E. #57915 - FIRM #005017
3816 MGRAE, SUITE A
EL PASO, TX 79925
PH#915-591-3312

DRAWN BY: EA
CHECKED BY: CJ
PROJECT No. HACIENDAS 1
DATE: JANUARY 12, 2015
SHEET TITLE: STREET PLAN - PROFILE RIO HACIENDAS CIR.
STA: 21+00 TO STA 29+00
SHEET: C-10
PAGE: 10 OF: 24





CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C24	28.00'	46.55'	30.70'	41.37'	N42°25'06"E	95°15'42"
C25	28.00'	41.41'	25.54'	37.74'	N47°34'54"W	84°44'18"
C26	28.00'	46.55'	30.70'	41.37'	N42°25'06"E	95°15'42"
C27	28.00'	41.41'	25.54'	37.74'	N47°34'54"W	84°44'18"



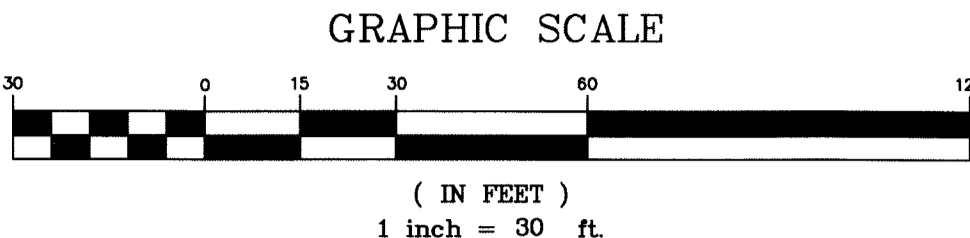
BENCHMARK: NCS BRASS CAP MARKER IN CONCRETE
 LATITUDE OF 30°35'40" LONGITUDE OF 96°35'55"
 ELEVATION 5293.57 MARSSE. G.T. OF EL. 1785. ELEVATION 5294.48'

HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 3B AND 301 AND ALL OF TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 16 UPPER VALLEY SURVEYS EL PASO COUNTY, TEXAS CONTAINING 33.504 ACRES

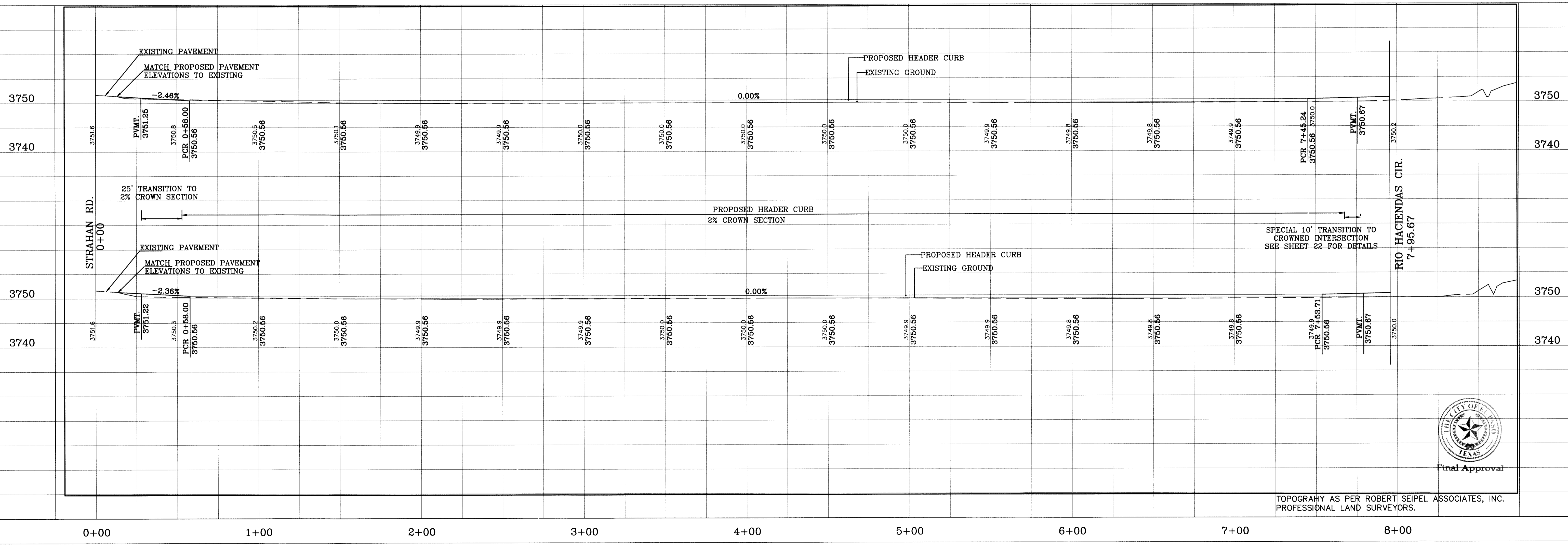
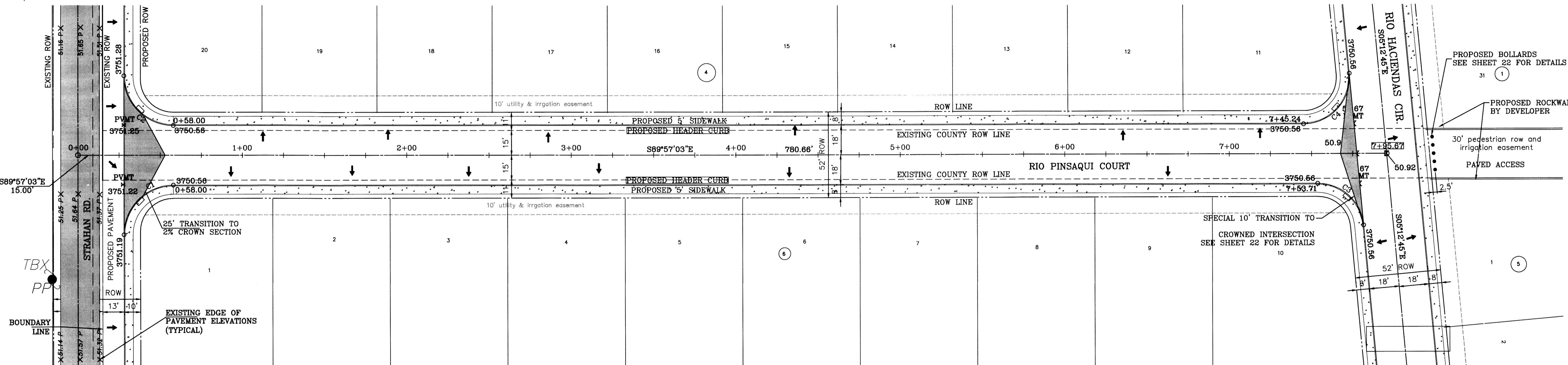
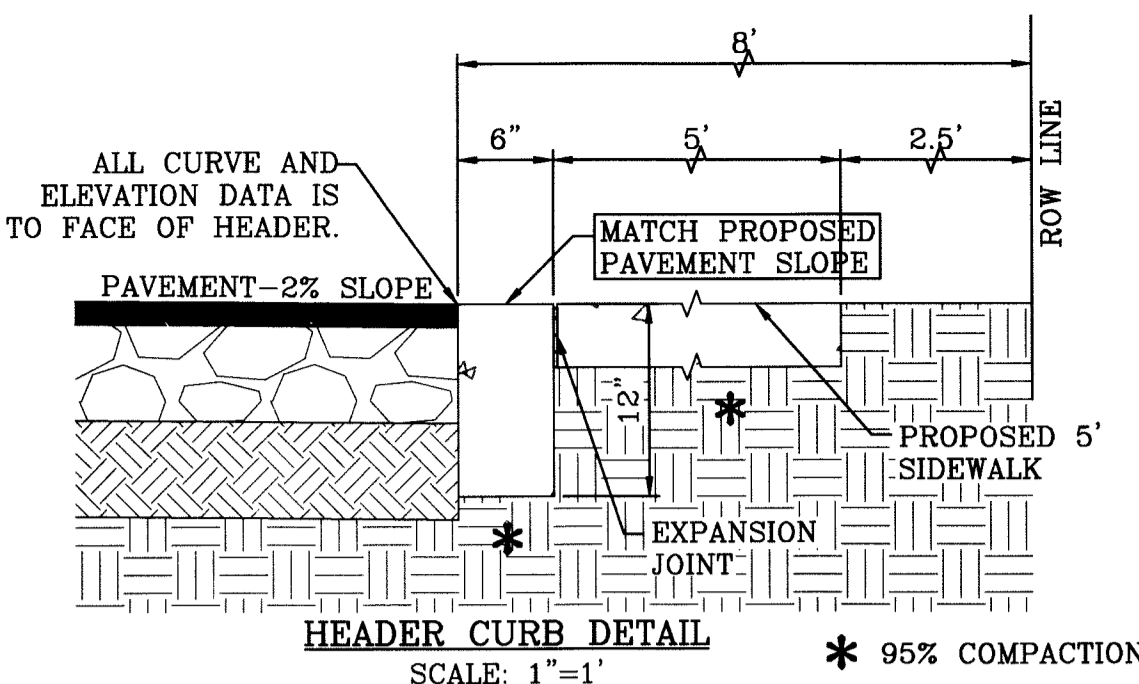
CIVIL ENGINEER
4S ENGINEERING SERVICES
 ALL BOURSLEIAN
 P.E. #57915 - FIRM#005017
 3616 McRAE, SUITE A
 EL PASO, TX 79925
 PH#913-891-3312

DRAWN BY: EA
 CHECKED BY: CJ
 PROJECT No. HACIENDAS 1
 DATE: JANUARY 12, 2015
 SHEET TITLE: STREET PLAN - PROFILE RIO HACIENDAS CIR
 STA: 29+00 TO STA 36+00
 SHEET: C-11
 PAGE: 11 OF: 24





CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	30.00'	47.12'	30.00'	42.43'	S45°02'57"W	90°00'00"
C2	30.00'	47.12'	30.00'	42.43'	S44°57'03"E	90°00'00"
C3	28.00'	41.41'	25.54'	37.74'	N47°34'54"W	84°44'18"
C4	28.00'	46.55'	30.70'	41.37'	N42°25'06"E	95°15'42"



BENCHMARK:
 N5S BRASS CAP MARKER IN CONCRETE 1.27' WET
 ELEV.=3739.37' NAVD83
 CITY OF EL PASO, ELEV.=3749.48'

HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 8B AND 3D1 AND ALL OF
 TRACT 9C AND A 30 FOOT COUNTY ROW, BLOCK 16
 UPPER VALLEY SURVEYS
 EL PASO COUNTY, TEXAS
 CONTAINING 83.5014 ACRES

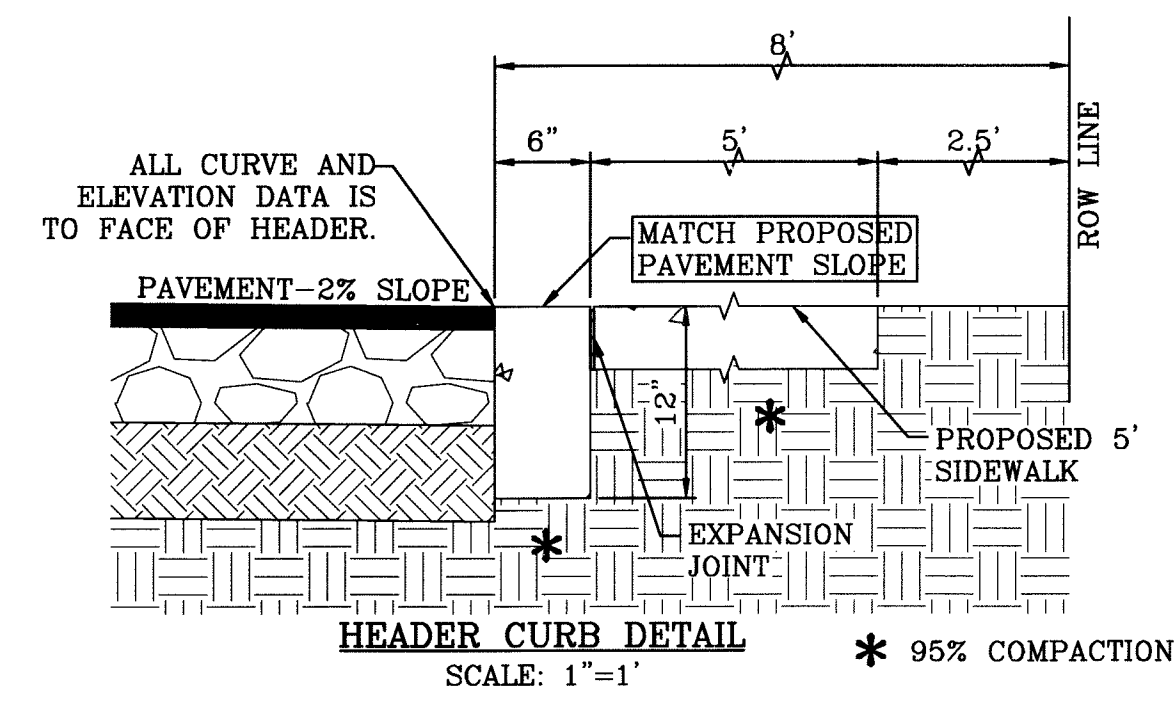
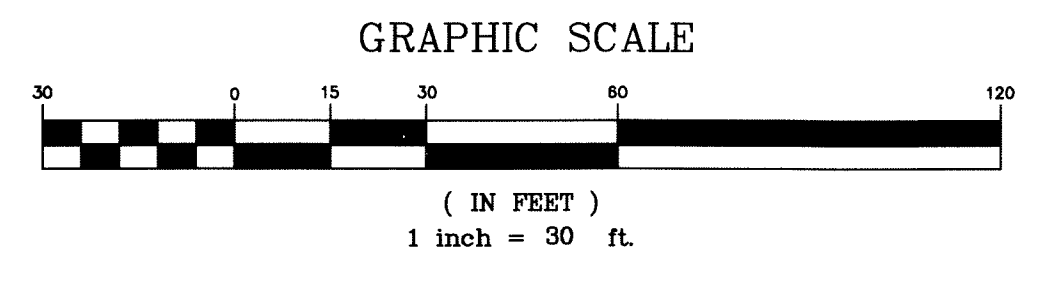
ENGINEER'S SEAL
 CIVIL ENGINEER
4S ENGINEERING SERVICES
 ALI BOURESLAN
 P.E.#57915-FIRM#005017
 3616 MGRAE, SUITE A
 EL PASO, TX 79925
 PH#915-591-3312

DRAWN BY: EA
 CHECKED BY: CJ
 PROJECT No. HACIENDAS 1
 DATE: JANUARY 12, 2015
 SHEET TITLE: STREET PLAN-PROFILE RIO PINSAQUI COURT.
 STA: 0+00 TO STA 7+95.67
 SHEET: C-12
 PAGE: 12 OF: 24



TOPOGRAPHY AS PER ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS.

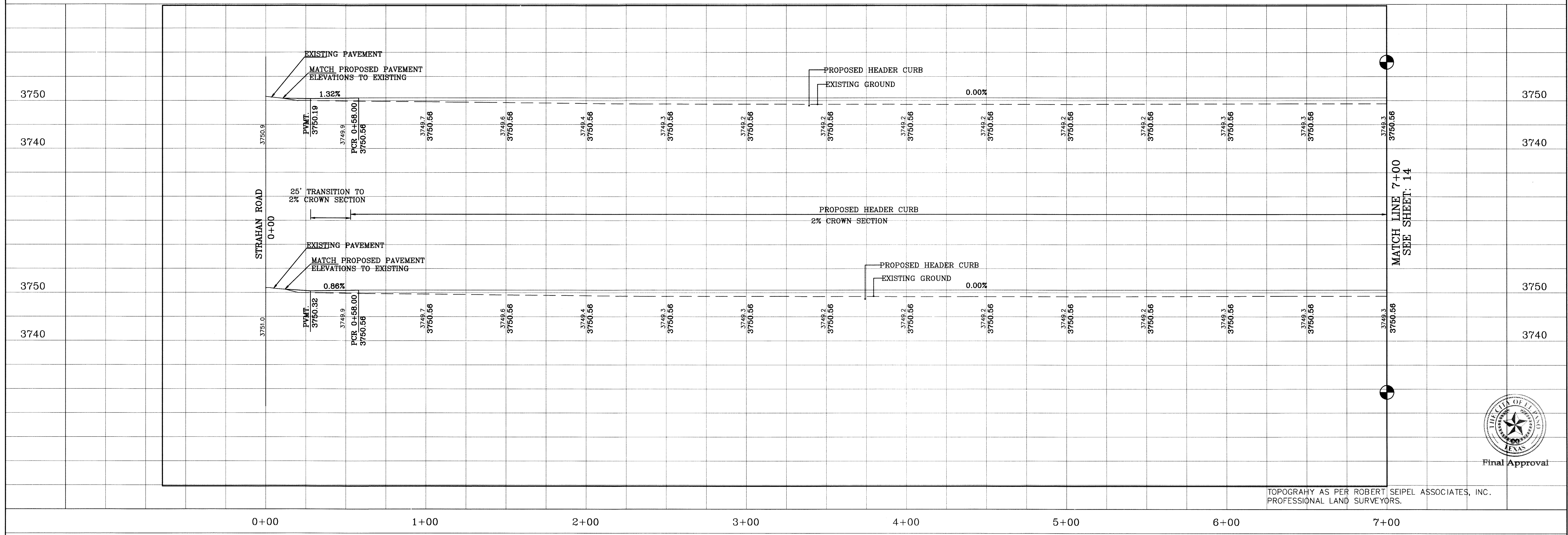
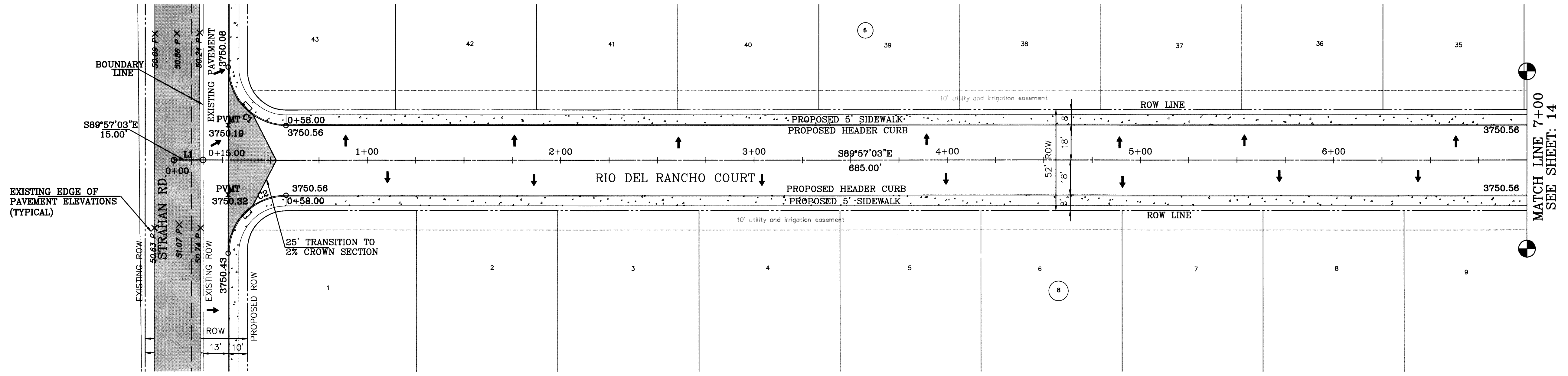
10 SINTERSKO DVA



CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	30.00'	47.12'	30.00'	42.43'	S44°57'03"E	90°00'00"
C2	30.00'	47.12'	30.00'	42.43'	S45°02'57"W	90°00'00"

LINE TABLE		
LINE	BEARING	LEGNTH
L1	S89°57'03"E	15.00

BENCHMARK: NOS BRASS CUP MARK SET Y-27 WITH LATITUDE OF 31°43'40" LONGITUDE OF 106°55'55" ELEV.=3759.37 MWD086. CITY OF EL PASO ELEV.=3748.48'



HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 38 AND 301 AND ALL OF TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 16 UPPER VALLEY SURVEYS EL PASO COUNTY, TEXAS CONTAINING 33.5014 ACRES

CIVIL ENGINEER
4S ENGINEERING SERVICES
 ALLI BOURESLIAN, M.E. #005017
 3616 MARIE, SUITE A
 EL PASO, TX 79925
 PH#915-591-3312

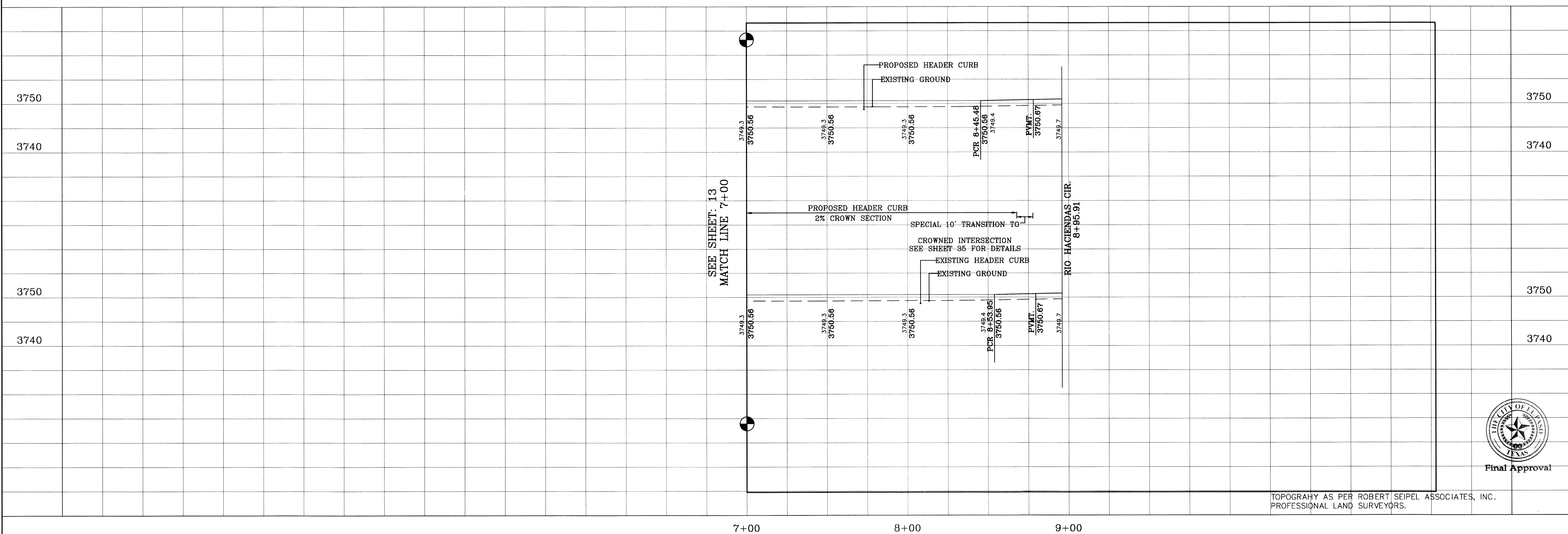
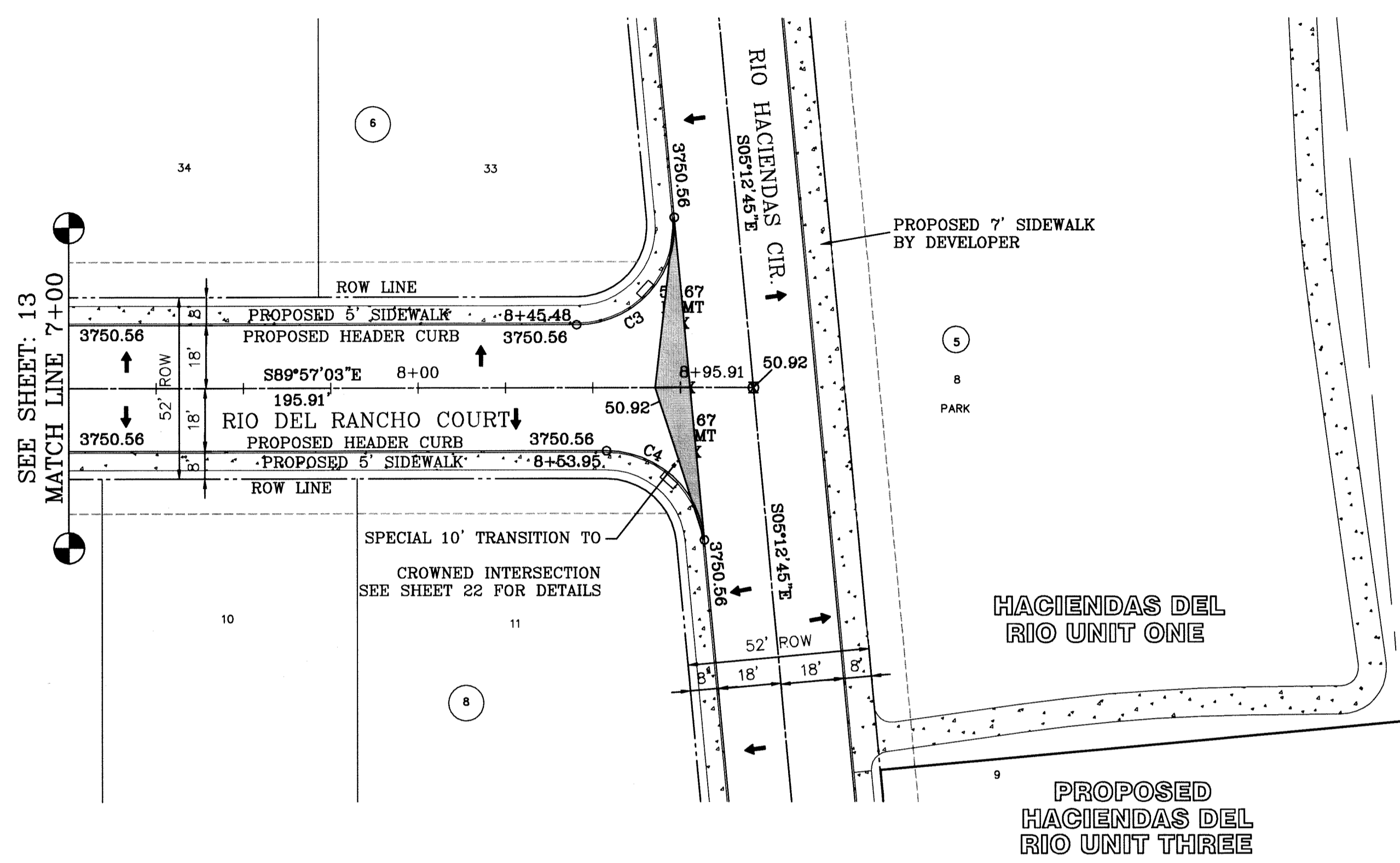
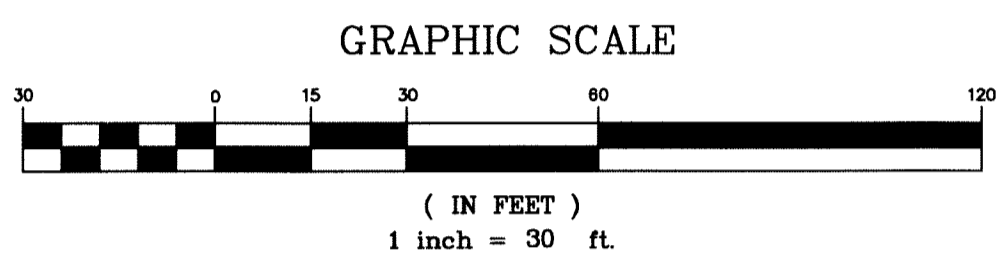
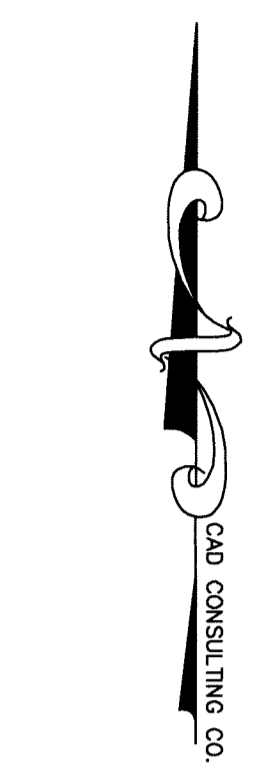
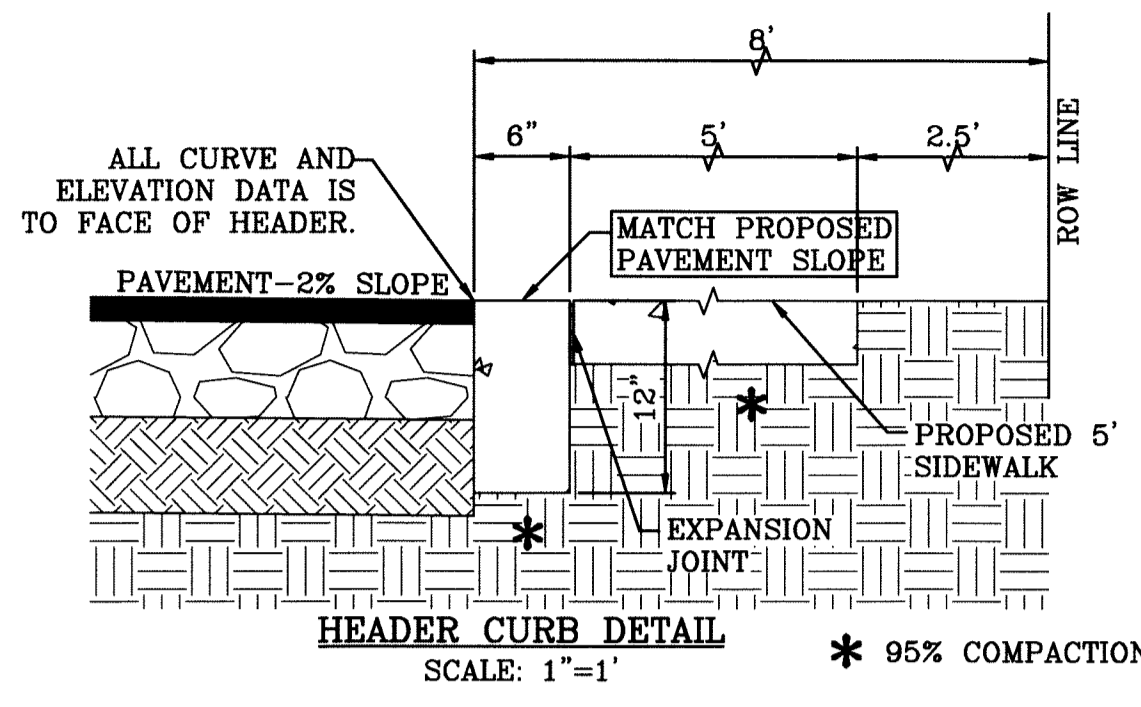
DRAWN BY: EA
 CHECKED BY: C.J.
 PROJECT No. HACIENDAS 1
 DATE: JANUARY 12, 2015
 SHEET TITLE: STREET PLAN-PROFILE RIO DEL RANCHO COURT STA: 0+00 TO STA 7+00
 SHEET: C-13
 PAGE: 13 OF: 24



Final Approval

TOPOGRAPHY AS PER ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS.

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C3	28.00'	46.55'	30.70'	41.37'	N42°25'08"E	95°15'42"
C4	28.00'	41.41'	25.54'	37.74'	N47°34'54"W	84°44'18"



Final Approval

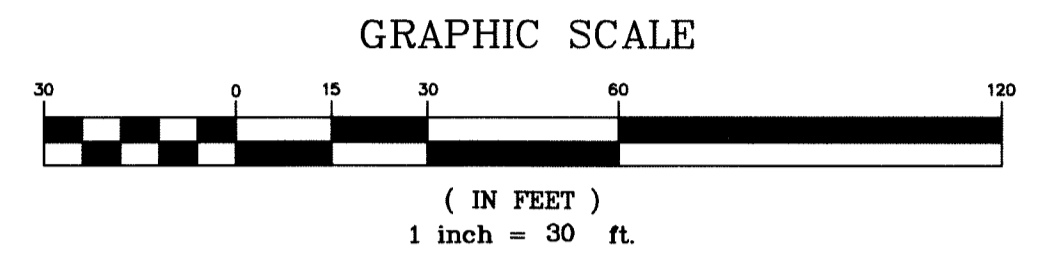
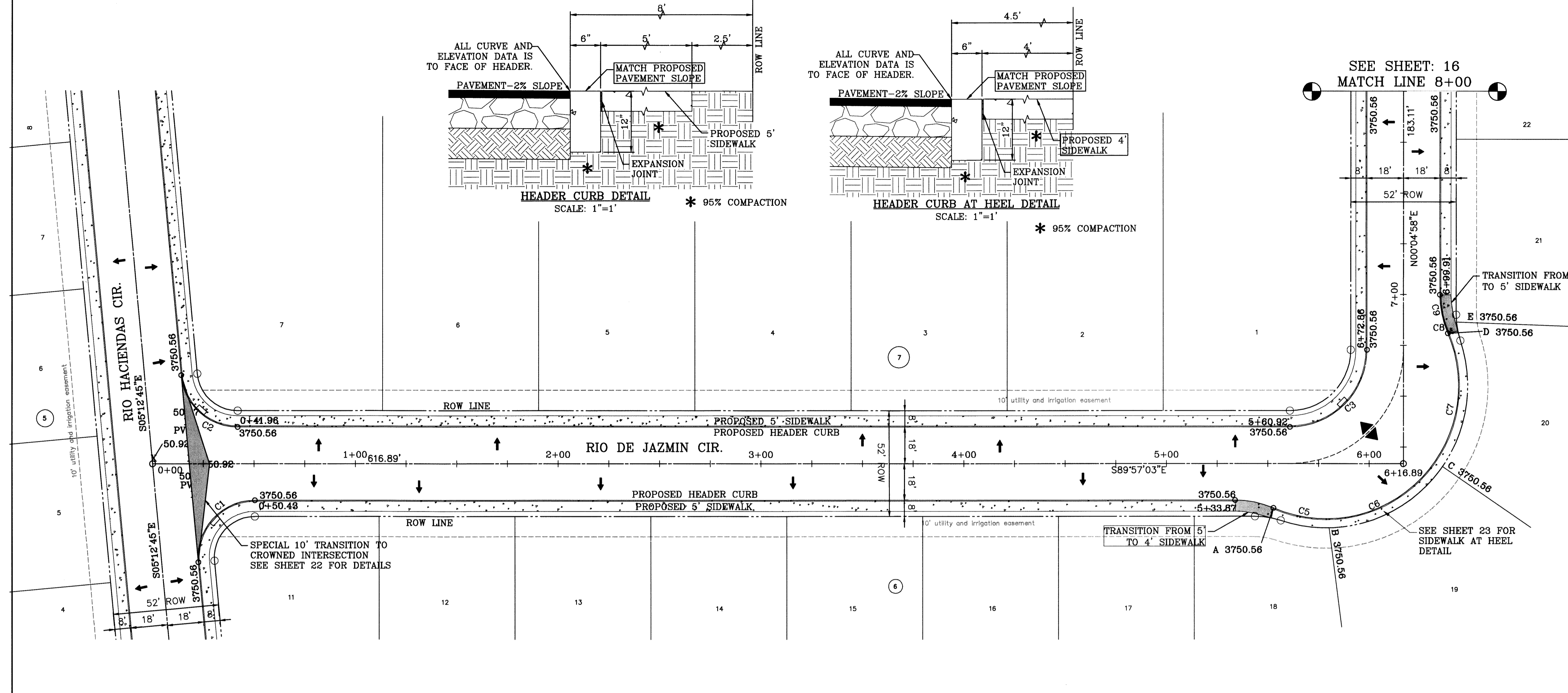
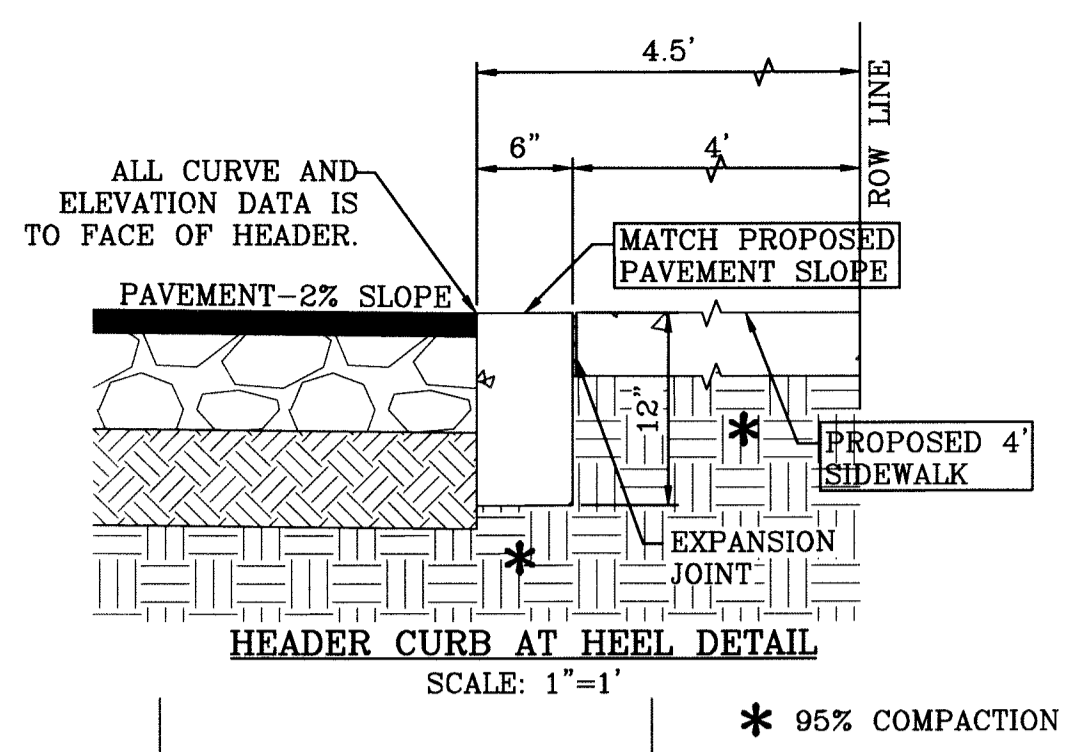
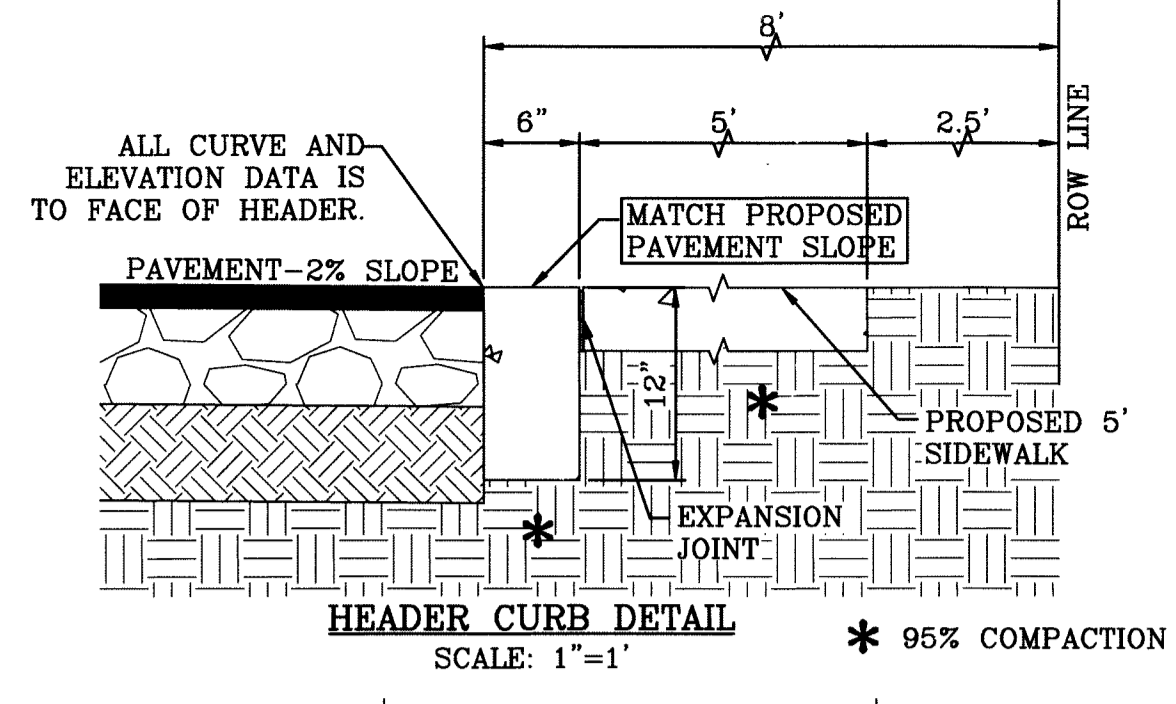
TOPOGRAPHY AS PER ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS.

BENCHMARK:	
N5 BRASS CAP MARKER IN CONCRETE 7-27 WITH	
ELEVATION 3749.48	
EL PASO COUNTY, TEXAS	
EL PASO COUNTY, TEXAS	
EL PASO COUNTY, TEXAS	

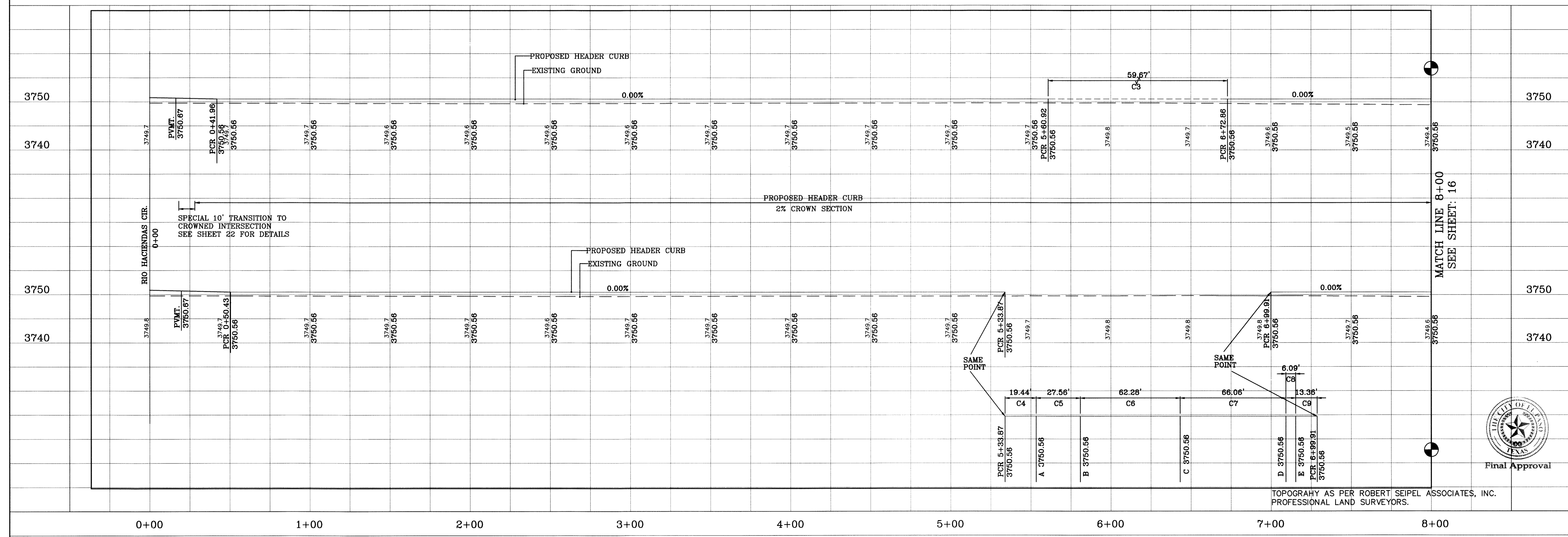
HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 38 AND 301 AND ALL OF
 TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 18
 UPPER VALLEY SURVEYS
 EL PASO COUNTY, TEXAS
 CONTAINING 38.5014 ACRES

CIVIL ENGINEER
AS ENGINEERING SERVICES
 ALI BOURLESIAN
 P.E. #57915 - FIRM#005017
 3816 McRAE, SUITE A
 EL PASO, TX 79925
 PH#915-591-3312

DRAWN BY: EA
 CHECKED BY: CJ
 PROJECT No. HACIENDAS 1
 DATE: JANUARY 12, 2015
 SHEET TITLE: STREET PLAN-PROFILE
 RIO DEL RANCHO COURT
 STA: 0+00 TO STA 8+95.91
 SHEET: C-14
 PAGE: 14 OF: 24



CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	28.00'	46.55'	30.70'	41.37'	N42°25'06"E	95°15'42"
C2	28.00'	41.41'	25.54'	37.74'	N47°34'54"W	84°44'18"
C3	38.00'	59.87'	37.98'	53.72'	S45°03'57"W	89°57'59"
C4	48.00'	19.44'	9.86'	19.31'	S78°20'52"E	23°12'22"
C5	65.50'	27.56'	13.99'	27.36'	N78°48'03"W	24°06'44"
C6	65.50'	62.28'	33.72'	59.96'	S81°54'06"W	54°28'58"
C7	65.50'	66.06'	36.15'	63.29'	S05°46'07"W	57°47'01"
C8	48.00'	6.09'	3.05'	6.08'	N19°29'29"W	7°15'50"
C9	48.00'	13.36'	6.72'	13.31'	N07°53'18"W	15°56'31"



Final Approval

TOPOGRAPHY AS PER ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS.

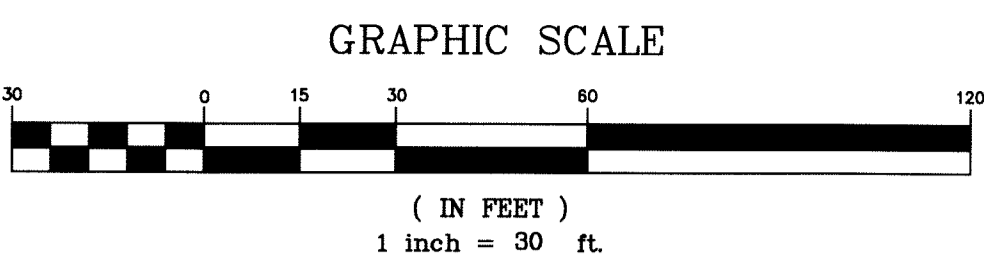
BENCHMARK:
 NCS BRASS CAP MARKER IN CONCRETE 7'-27" WITH
 LATITUDE OF 30°53'40" LONGITUDE OF 106°33'55"
 ELEVATION 2007 NUMBER: C.T. OF EL. 1985 ELEVATION 48'

HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 98 AND 921 AND ALL OF
 TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 16
 UPPER VALLEY SURVEYS
 EL PASO COUNTY, TEXAS
 CONTAINING 38.504 ACRES

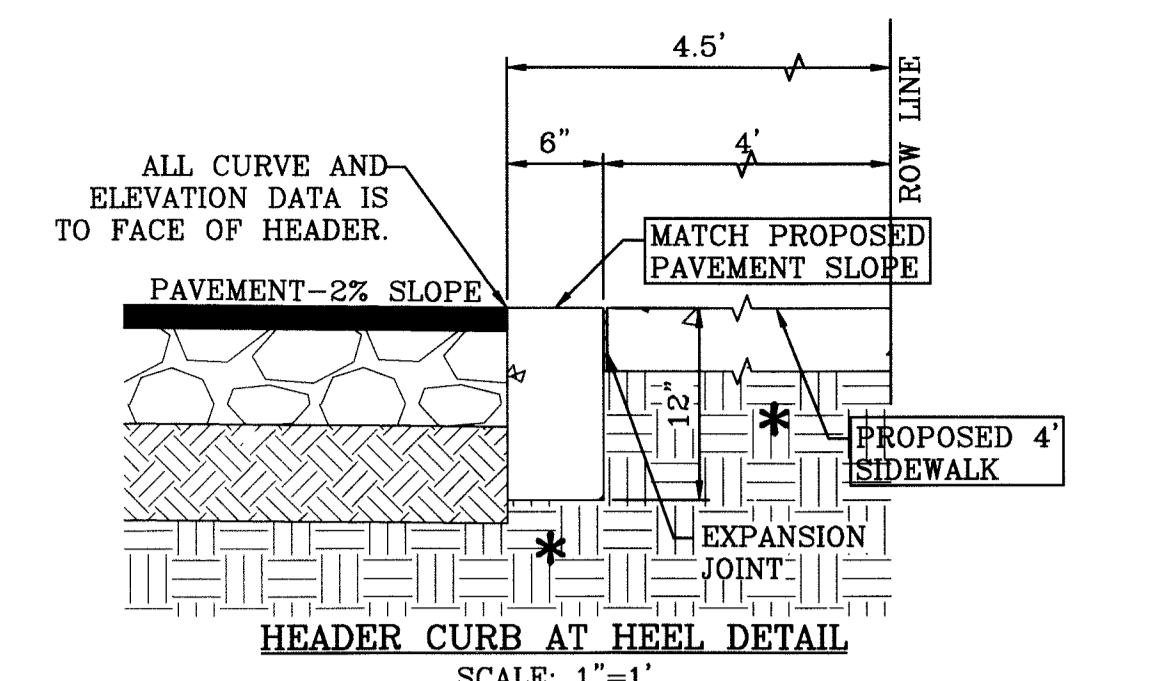
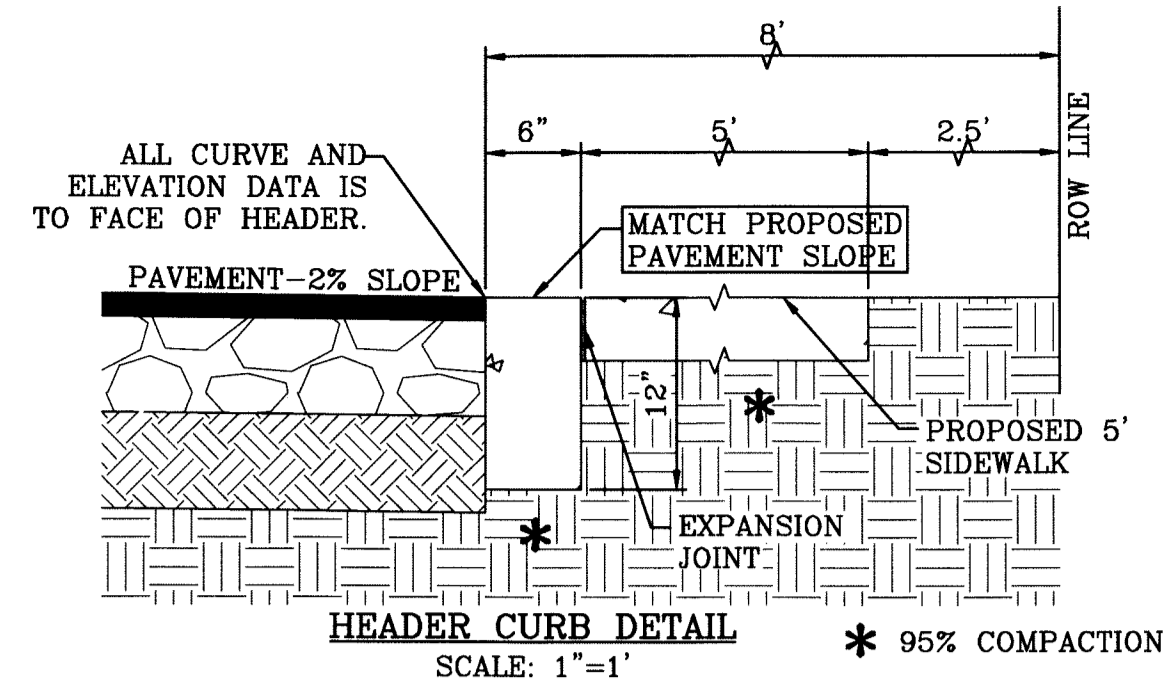
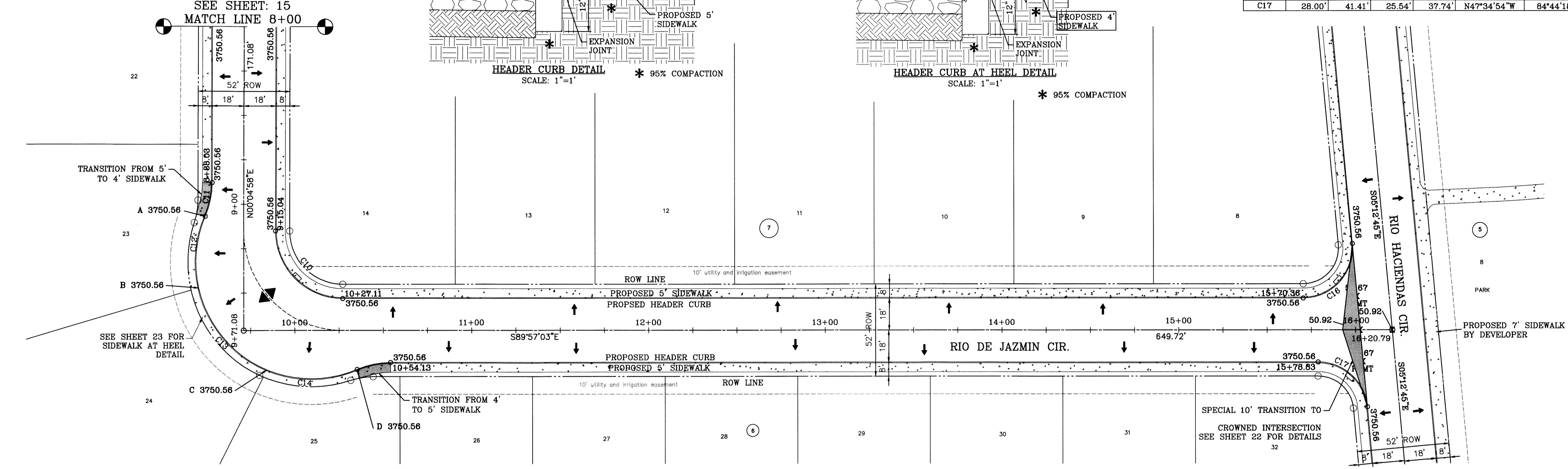
ENGINEER'S SEAL
 Ali Bourreslan
 6/12/15

CIVIL ENGINEER
AS ENGINEERING SERVICES
 ALI BOURRESLAN
 P.E. #57915 - FIRM#005017
 3616 MCGRAE, SUITE A
 EL PASO, TX 79925
 PH#915-591-3312

DRAWN BY: CA
 CHECKED BY: CJ
 PROJECT No. HACIENDAS 1
 DATE: JANUARY 12, 2015
 SHEET TITLE:
STREET PLAN - PROFILE
RIO DE JAZMIN CIR.
 STA: 0+00 TO 8+00
 SHEET: C-15
 PAGE: 15 OF: 24



CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C10	38.00'	59.71'	38.02'	53.76'	S44°56'03"E	90°02'01"
C11	48.00'	19.43'	9.85'	19.30'	N11°40'45"E	23°11'34"
C12	65.50'	41.15'	21.28'	40.47'	S05°16'43"W	35°59'37"
C13	65.50'	62.38'	33.78'	60.05'	S40°00'05"E	54°34'00"
C14	65.50'	52.43'	27.71'	51.04'	N89°47'09"E	45°51'32"
C15	48.00'	19.43'	9.85'	19.30'	S78°27'10"W	23°11'34"
C16	28.00'	46.55'	30.70'	41.37'	N42°25'06"E	95°15'42"
C17	28.00'	41.41'	25.54'	37.74'	N47°34'54"W	84°44'18"



BENCHMARK:
 N5S BRASS CAP MARKER IN CONCRETE V-27 WITH
 ELEV.=3759.37 NUMBER. C.T. OF EL. PASO, ELEV.=3748.48'

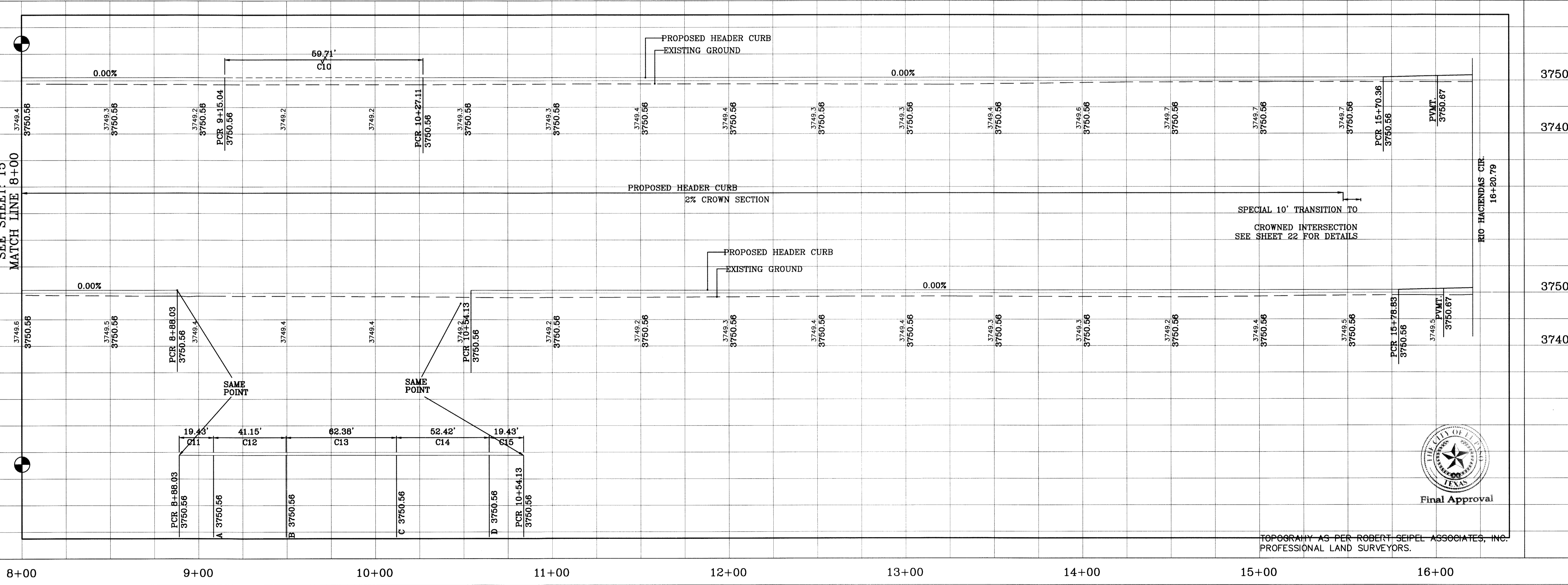
HACIENDAS DEL RIO UNIT ONE

BEING A PORTION OF TRACTS 9B AND 9D1 AND ALL OF
 TRACT 9C AND A 30 FOOT COUNTY ROW, BLOCK 16
 UPPER VALLEY SURVEYS
 EL PASO COUNTY, TEXAS
 CONTAINING 88.504 ACRES

ENGINEER'S SEAL

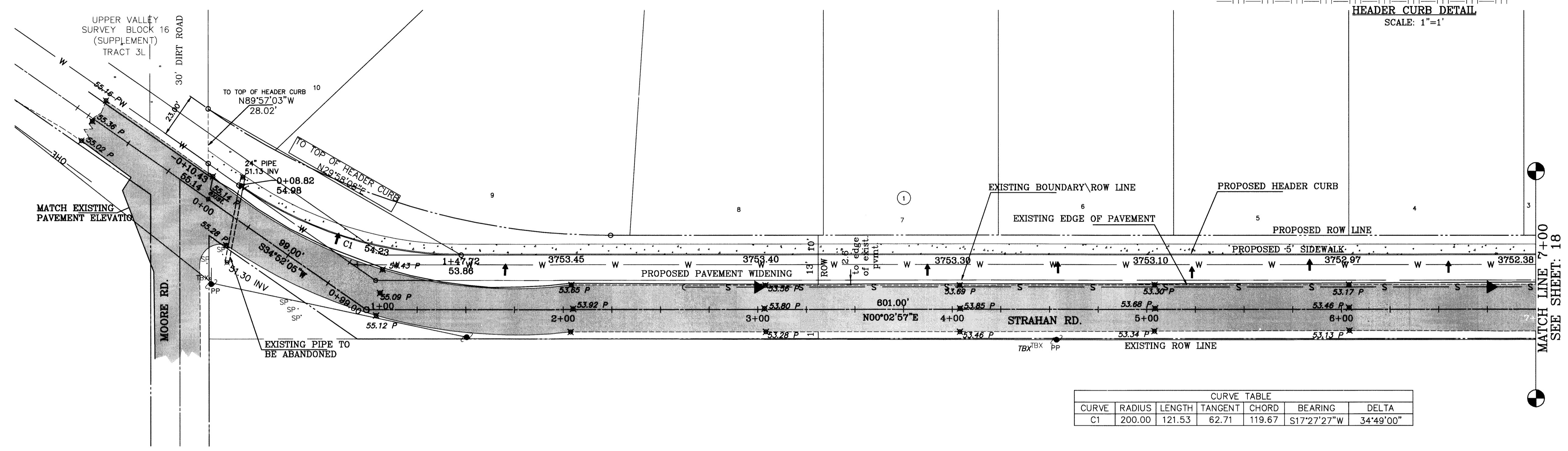
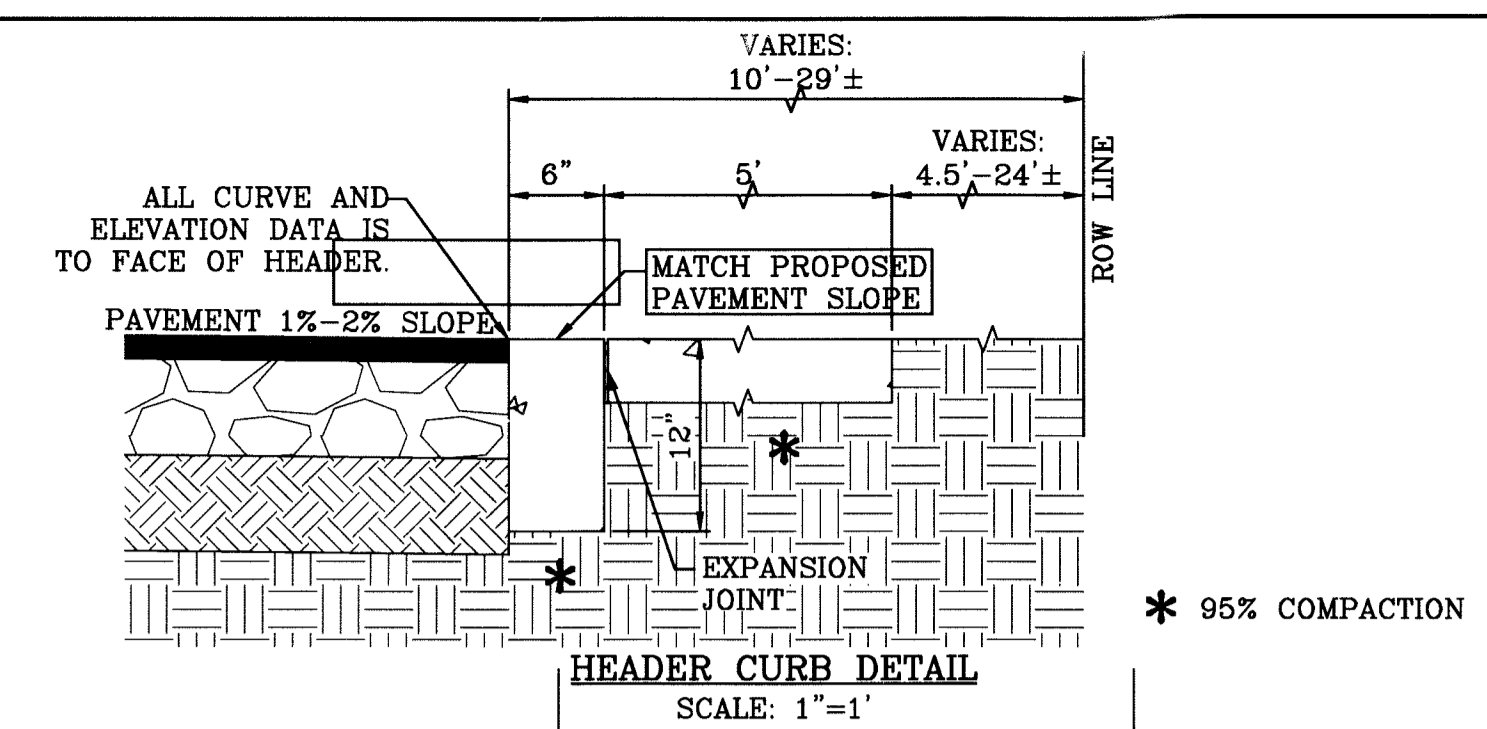
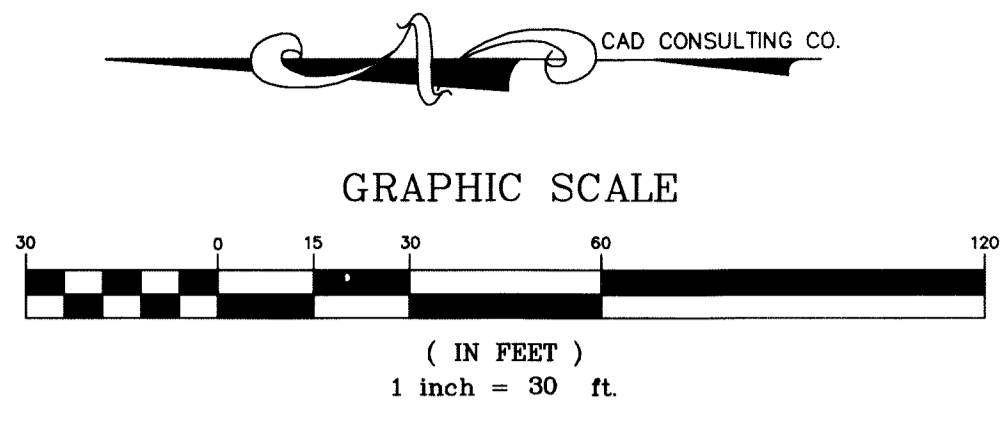
 CIVIL ENGINEER
AS ENGINEERING SERVICES
 ALI BOURESAN
 P.E.#57915-FIRM#005017
 3616 AGRAL, SUITE A
 EL PASO, TX 79925
 PH#915-391-3312

DRAWN BY: EA
 CHECKED BY: CJ
 PROJECT No. HACIENDAS 1
 DATE: JANUARY 12, 2015
 SHEET TITLE:
STREET PLAN-PROFILE
 RIO DE JAZMIN CIR.
 STA: 8+00 TO 16+20.79
 SHEET: C-16
 PAGE: 16 OF: 24

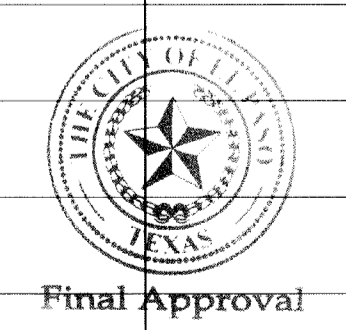
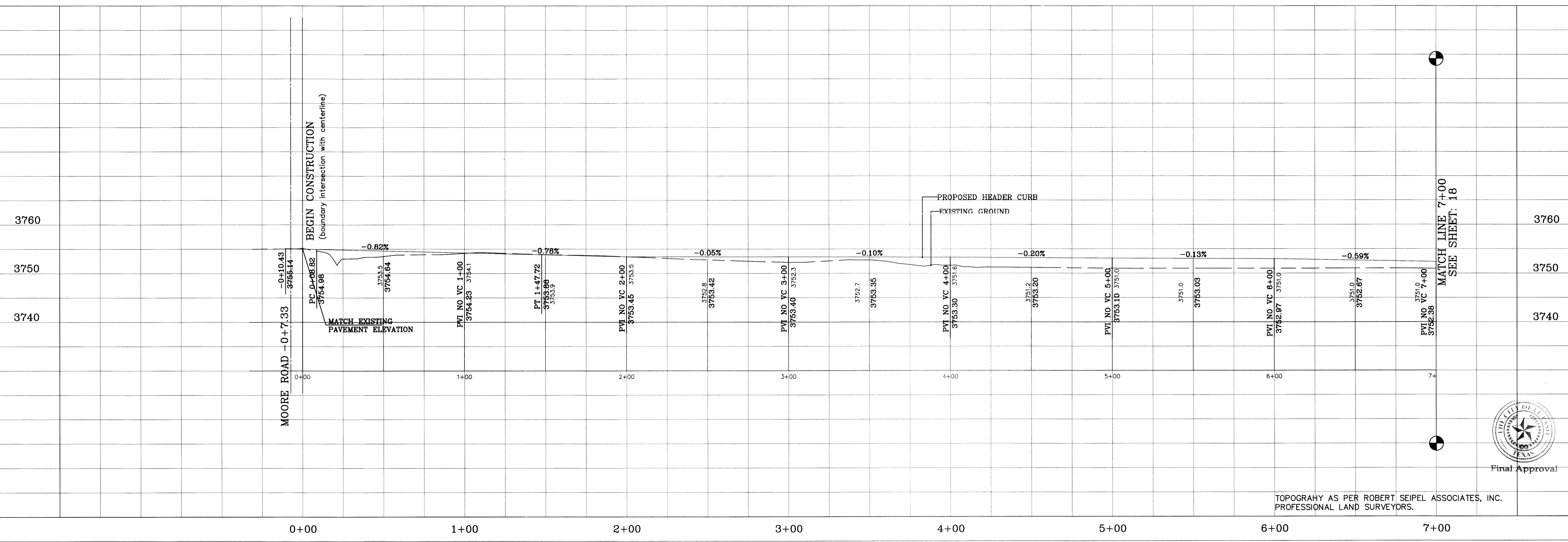


TOPOGRAPHY AS PER ROBERT SEIPER ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS.

Final Approval



CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	200.00	121.53	62.71	119.67	S17°27'27"W	34°49'00"



TOPOGRAPHY AS PER ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS.

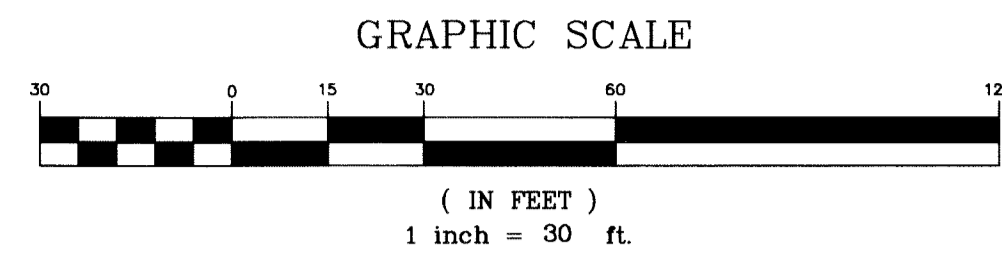
BENCHMARK:
 NCS BRASS CAP MARKER IN CONCRETE 7-27-74 WITH
 ELEV.=3759.37 NAVD83
 CITY OF EL PASO ELEV.=3749.48'

HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 98 AND 9D1 AND ALL OF
 TRACT 9C AND A 30 FOOT COUNTY ROW, BLOCK 16
 UPPER VALLEY SURVEY
 EL PASO COUNTY, TEXAS
 CONTAINING 33.5014 ACRES

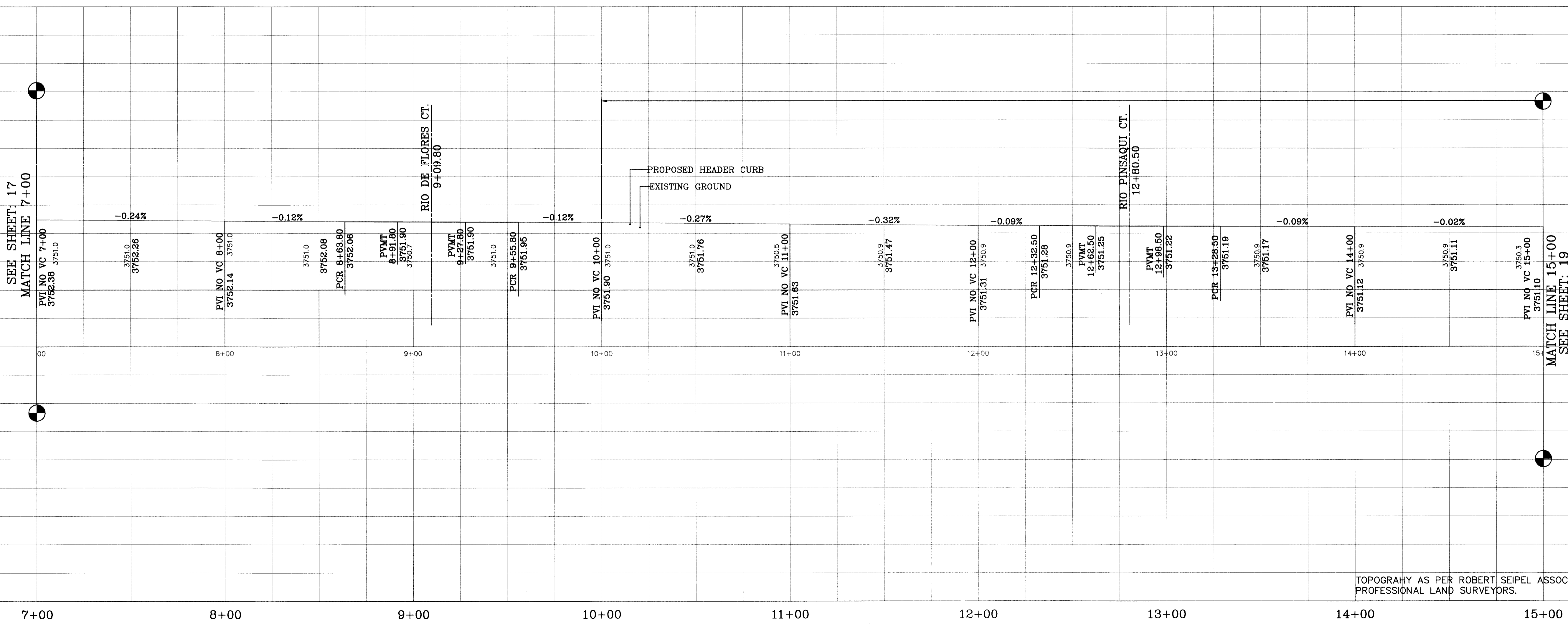
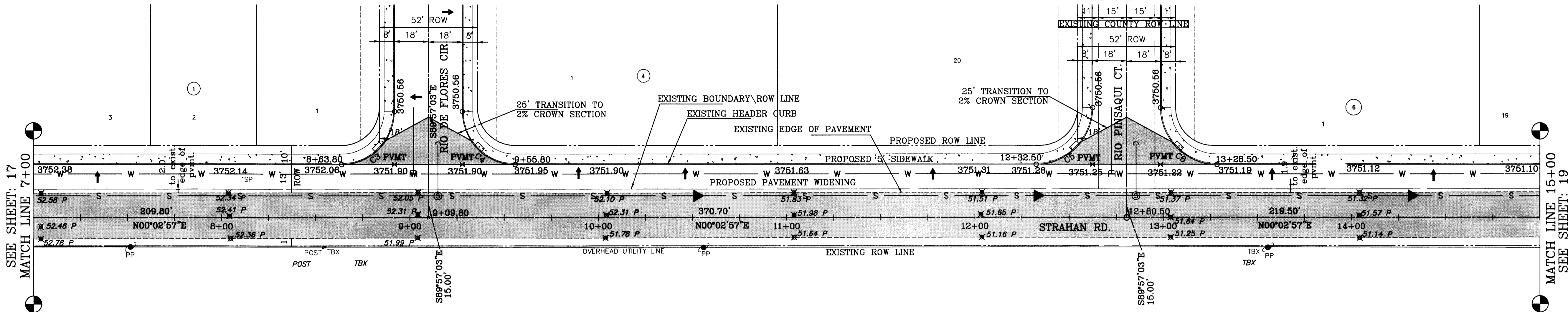
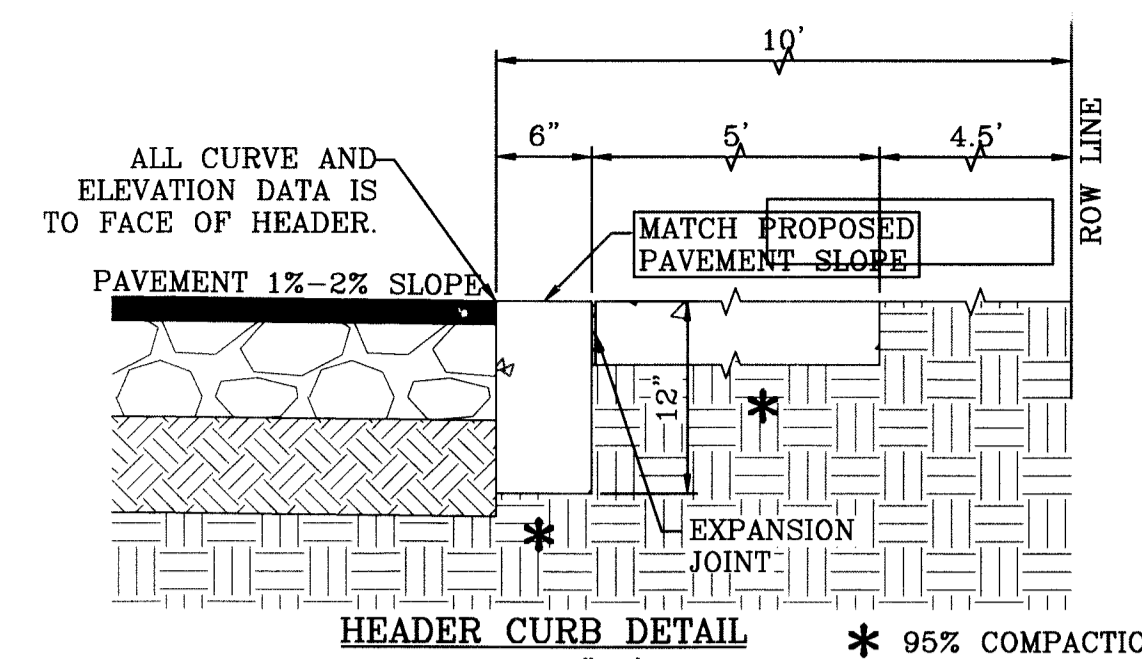
CIVIL ENGINEER
AS ENGINEERING SERVICES
 ALI BOURLESIAN
 P.E. #57915 - FIRM#005017
 3616 MCGRAE, SUITE A
 EL PASO, TEXAS 79905
 PH#915-591-3312

DRAWN BY:
 EA
 CHECKED BY:
 CJ
 PROJECT No.
 HACIENDAS 1
 DATE:
 JANUARY 12, 2015
 SHEET TITLE:
**STREET
 PLAN-PROFILE**
 STRAHAN ROAD
 STA: 0+00
 TO
 STA 7+00.00

SHEET:
C-17
 PAGE: 17
 OF: 24



CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C3	28.00'	43.98'	28.00'	39.60'	S44°57'03"E	90°00'00"
C4	28.00'	43.98'	28.00'	39.60'	S45°02'57"W	90°00'00"
C5	30.00'	47.12'	30.00'	42.43'	S44°57'03"E	90°00'00"
C6	30.00'	47.12'	30.00'	42.43'	S45°02'57"W	90°00'00"

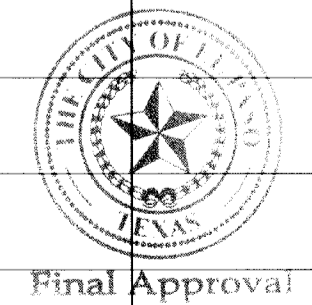


BENCHMARK:
 NCS BRASS CAP MARKER IN CONCRETE 7-27 WITH
 LATITUDE OF 31°53'40", LONGITUDE OF 106°35'55",
 ELEVATION OF 3759.37 MWD88, CITY OF EL PASO, TEXAS
 ELEVATION OF 3749.48

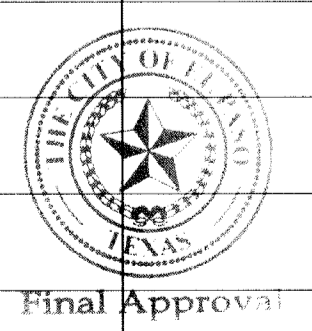
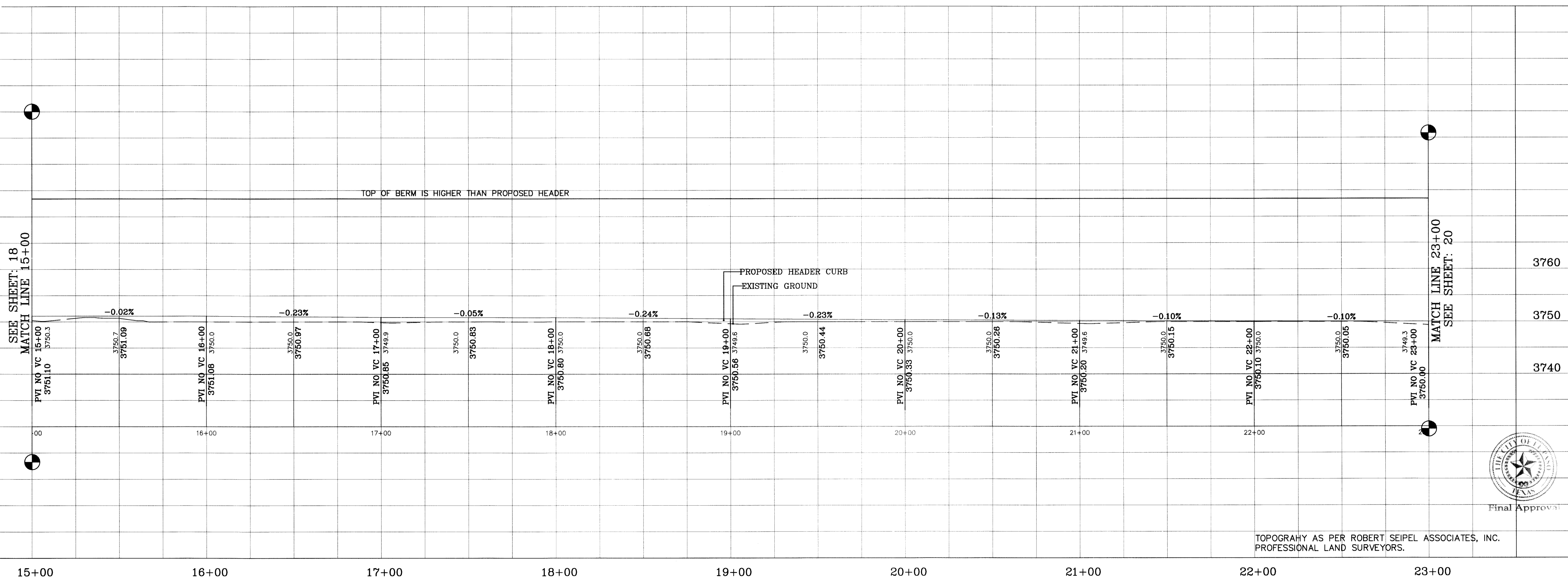
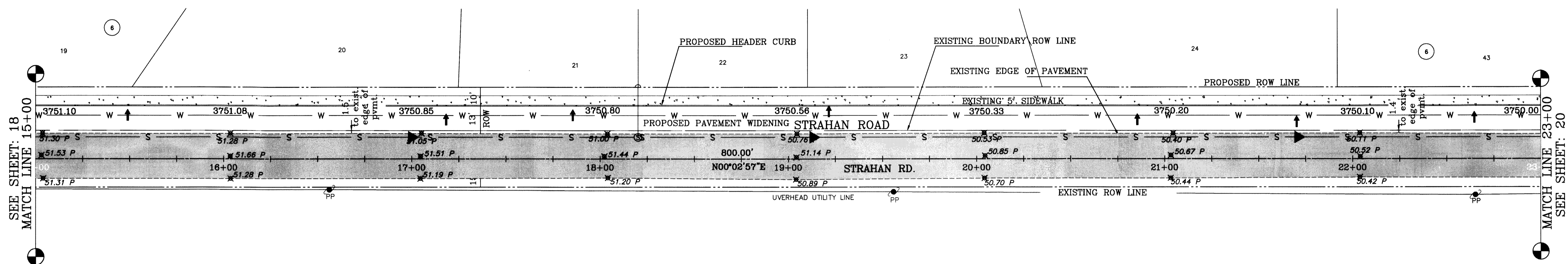
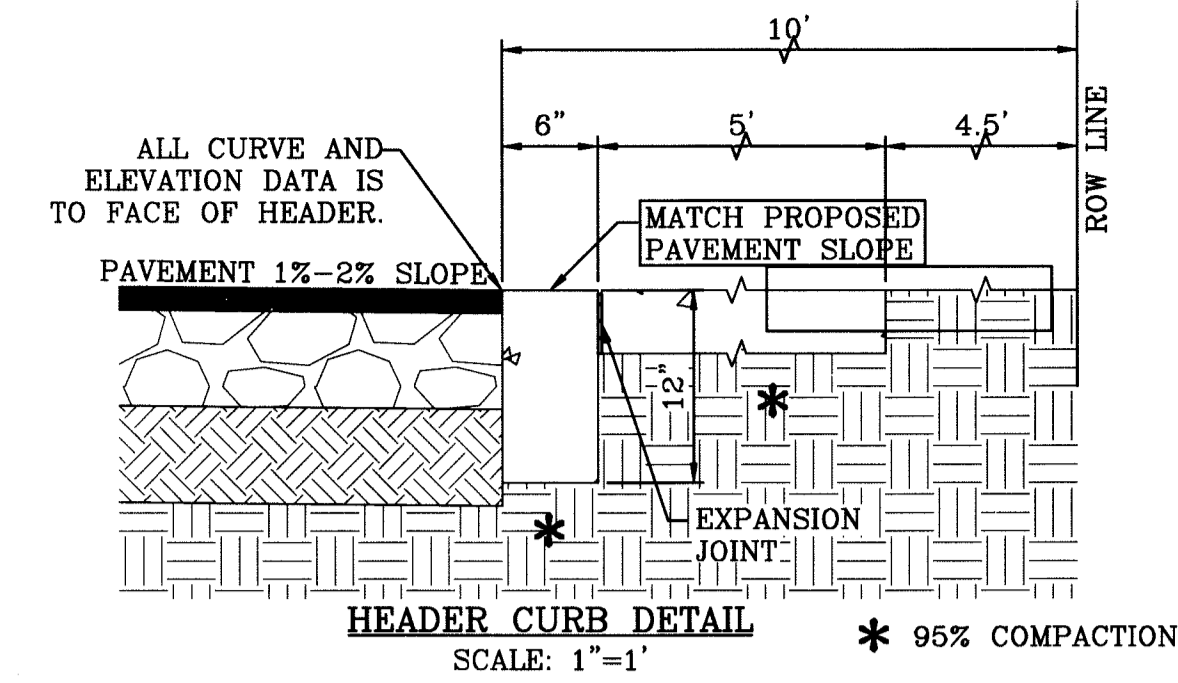
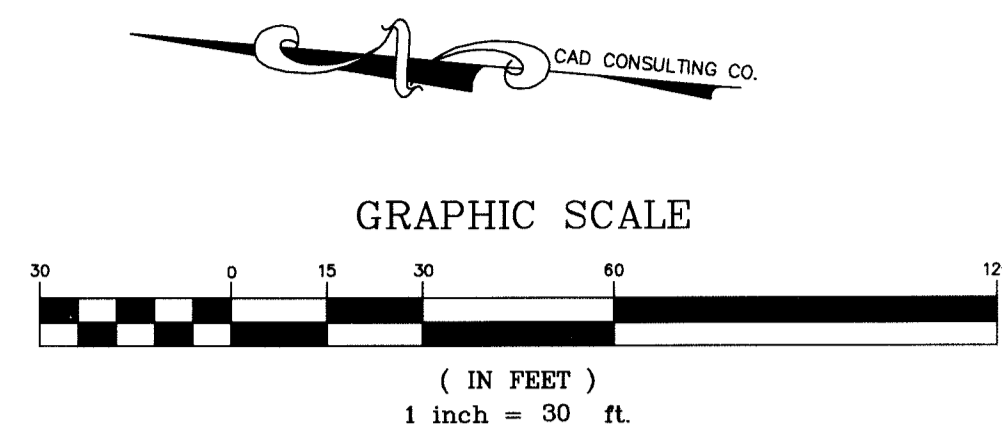
HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 9B AND 9D AND ALL OF
 TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 16
 UPPER VALLEY SURVEYS
 EL PASO COUNTY, TEXAS
 CONTAINING 33.5014 ACRES

CIVIL ENGINEER
4S ENGINEERING SERVICES
 ALLI ROBERTSON
 P.E. #57915 - FIRM #005017
 3616 MGRAE, SUITE A
 EL PASO, TX 79925
 PH#915-591-3312

DRAWN BY: EA
 CHECKED BY: CJ
 PROJECT No. HACIENDAS 1
 DATE: JANUARY 12, 2015
 SHEET TITLE: STREET PLAN - PROFILE
 STRAHAN ROAD
 STA: 7+00.00 TO STA 15+00
 SHEET: C-18
 PAGE: 18 OF: 24



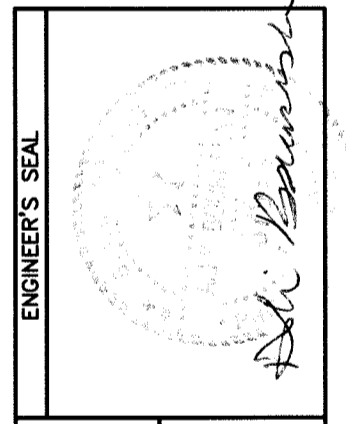
TOPOGRAPHY AS PER ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS.



TOPOGRAPHY AS PER ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS.

BENCHMARK:
 N5S BRASS CAP MARKER IN CONCRETE Y-27 WITH
 L.A. 208 3/8" OF 1/4" LONG UDL (ELEV. 3748.48)
 ELEV. 3750.57 NUMBER. C.T. OF EL PASO (ELEV. 3748.48)

HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 3B AND 3D1 AND ALL OF
 TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 16
 UPPER VALLEY SURVEYS
 EL PASO COUNTY, TEXAS
 CONTAINING 38.5014 ACRES

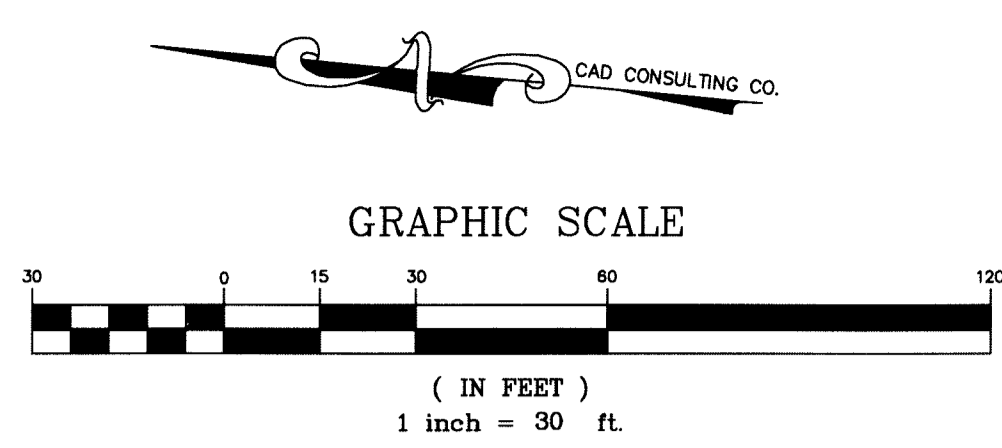


CIVIL ENGINEER
AS ENGINEERING SERVICES
 ALI BOURESILIAN
 P.E. #57915 - FIRM #005017
 3616 McRAE, SUITE A
 EL PASO, TX 79925
 PH#915-591-3312

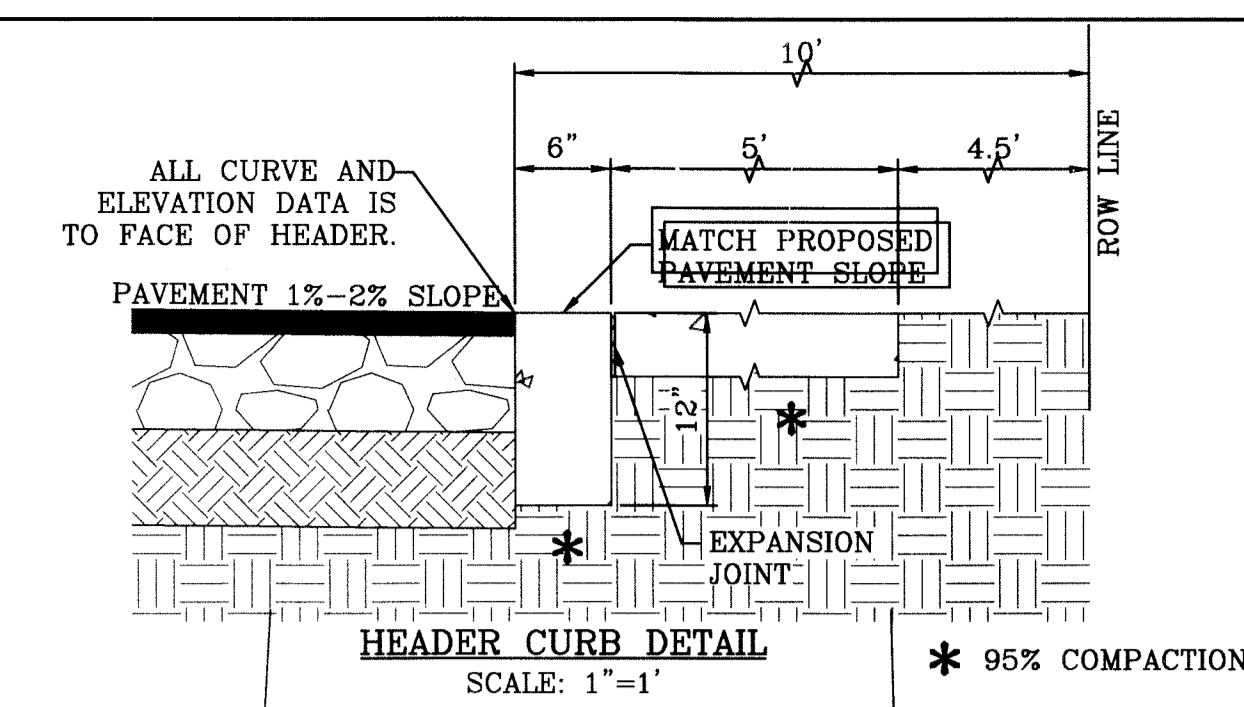
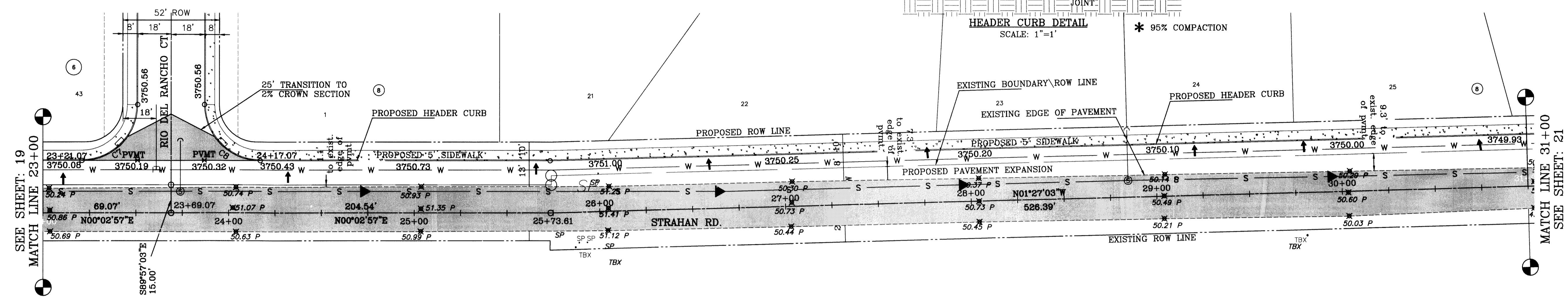
DRAWN BY:
 SA
 CHECKED BY:
 CJ
 PROJECT No.
 HACIENDAS 1
 DATE:
 JANUARY 12, 2015

SHEET TITLE:
**STREET
 PLAN-PROFILE**
STRAHAN ROAD
 STA: 15+00
 TO
 STA 23+00

SHEET:
C-19
 PAGE: 19
 OF: 24



CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C7	30.00'	47.12'	30.00'	42.43'	S44°57'03"E	90°00'00"
C8	30.00'	47.12'	30.00'	42.43'	S45°02'57"W	90°00'00"



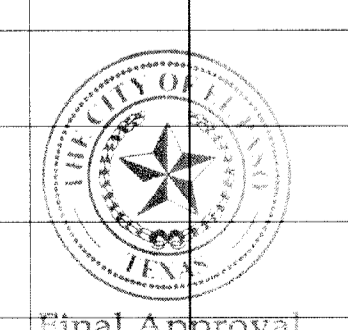
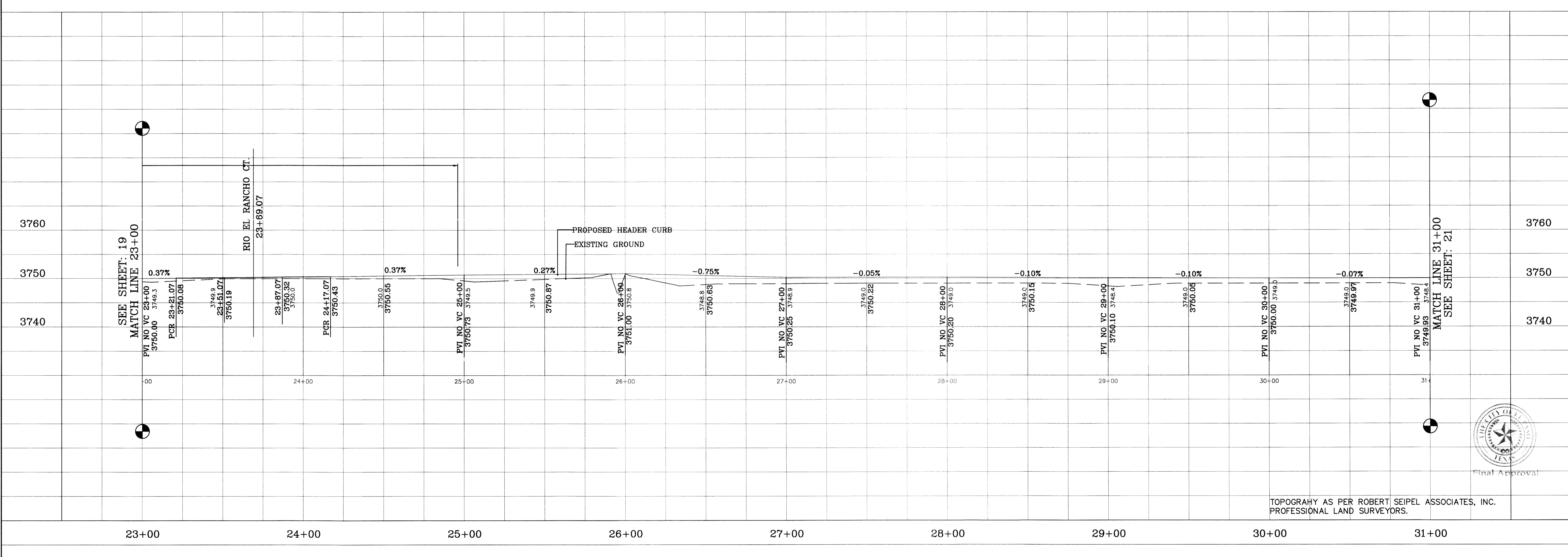
BENCHMARK:
 NGS BRASS CAP MARKER IN CONCRETE 7-27 WITH
 ELEV.=3749.37 NAVD83 CITY OF EL PASO ELEV.=3749.48'

HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 38 AND 301 AND ALL OF
 TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 16
 UPPER VALLEY SURVEYS
 EL PASO COUNTY, TEXAS
 CONTAINING 33.5014 ACRES

ENGINEER'S SEAL

 CIVIL ENGINEER
AS ENGINEERING SERVICES
 ALI BOURSLESAN
 P.E.#57915 - FIRM#005017
 3616 MGRAE, SUITE A
 EL PASO, TX 79925
 PH#915-391-3312

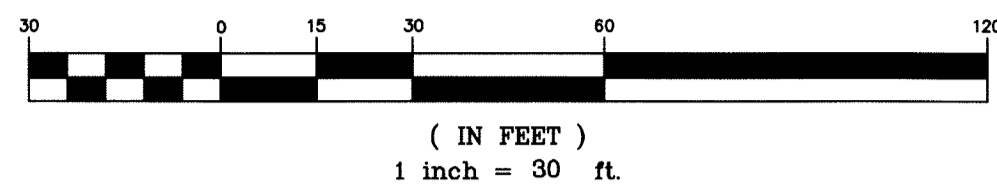
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 EA
 CHECKED BY:
 CJ
 PROJECT No.
 HACIENDAS 1
 DATE:
 JANUARY 12, 2015
 SHEET TITLE:
**STREET
 PLAN-PROFILE**
 STRAHAN ROAD
 STA: 23+00
 TO
 STA 31+00
 SHEET:
C-20
 PAGE: 20
 OF: 24



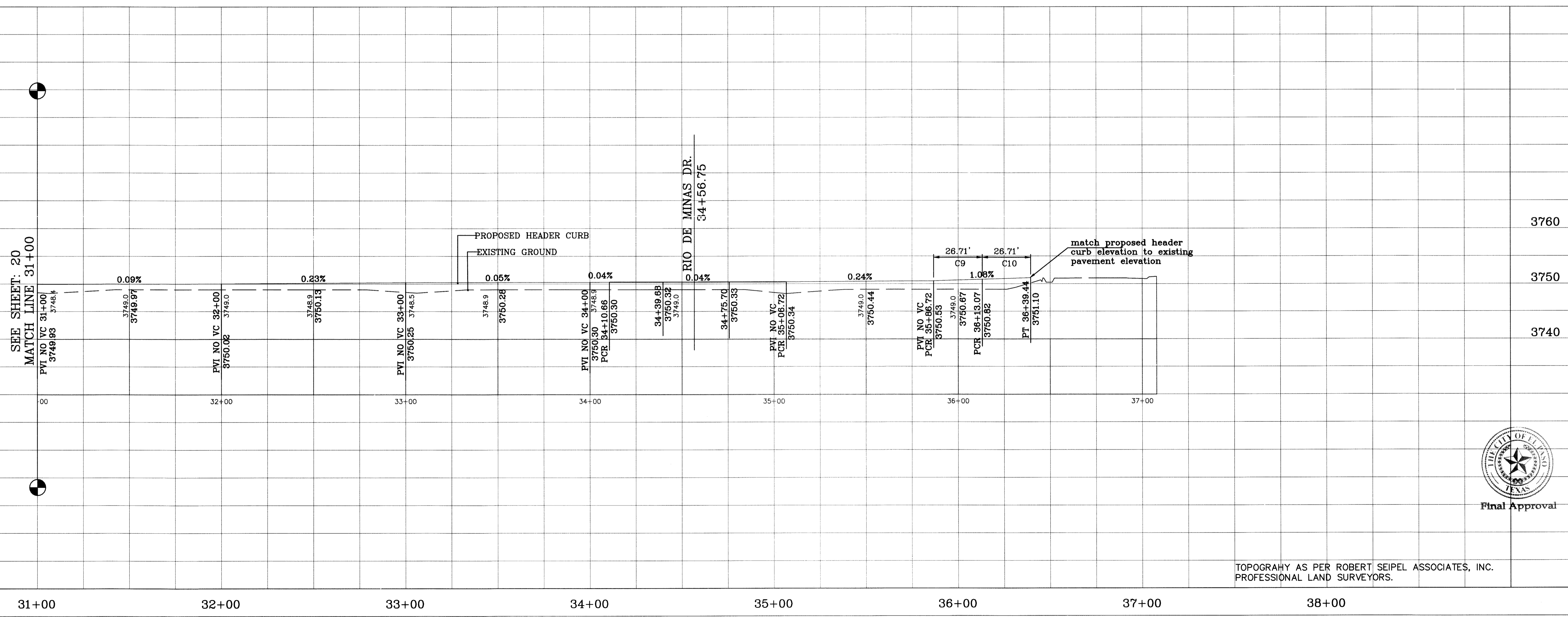
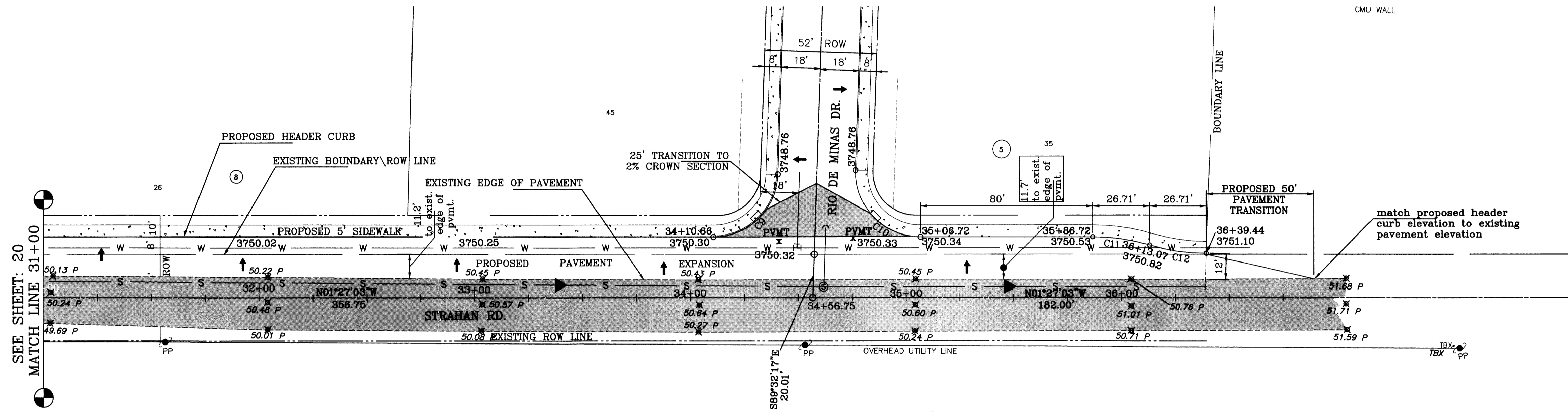
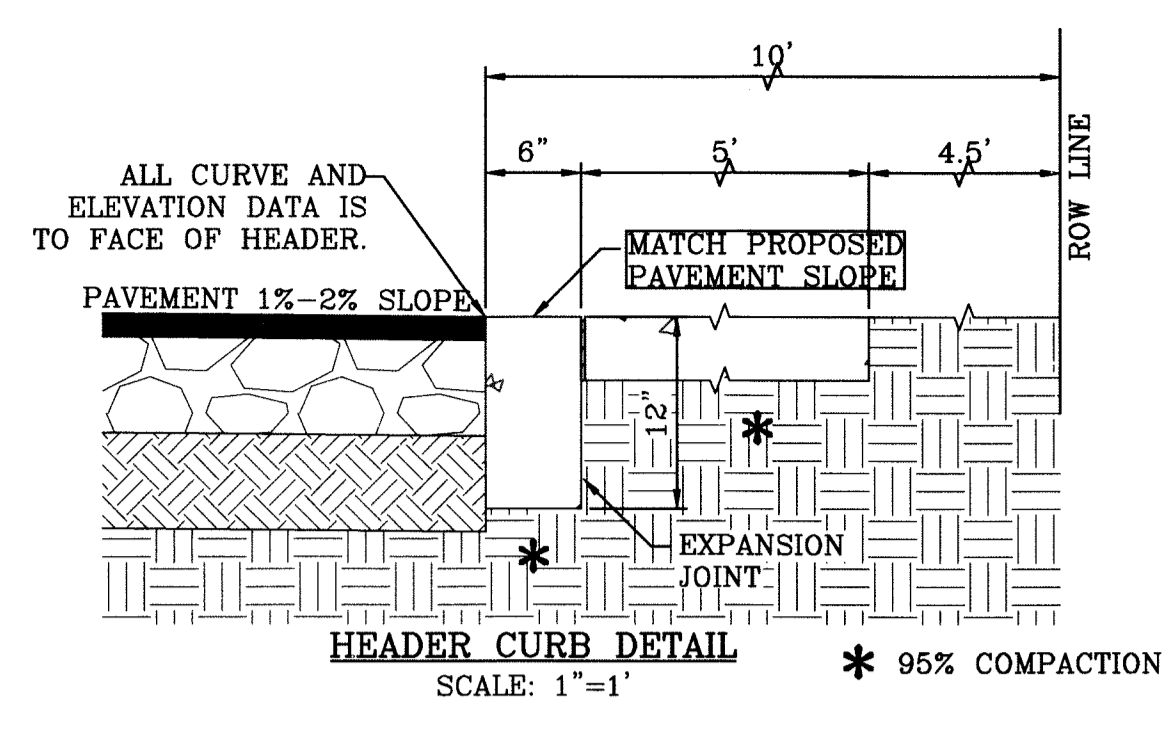
TOPOGRAPHY AS PER ROBERT SEIPEL ASSOCIATES, INC.
 PROFESSIONAL LAND SURVEYORS.



GRAPHIC SCALE

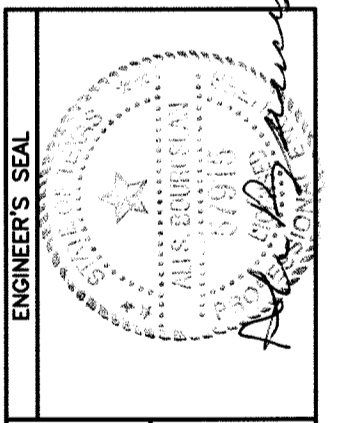


CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C9	30.00'	46.12'	29.01'	41.71'	S45°29'40"E	88°05'14"
C10	30.00'	43.80'	26.85'	40.01'	S48°38'04"W	83°39'18"
C11	93.33'	26.71'	13.44'	26.62'	N06°44'49"E	16°23'44"
C12	91.95'	26.71'	13.45'	26.62'	S06°37'23"W	16°38'37"

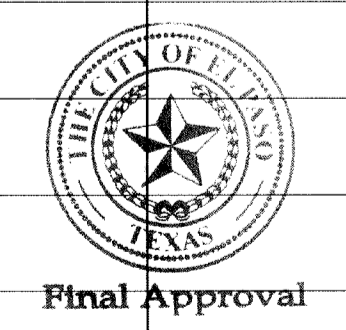


BENCHMARK:
 NCS BRASS ON WALKER IN CONCRETE 1/2" DIA. WITH
 ELEV.=3759.37 NAVD83
 CITY OF EL PASO ELEV.=3749.48'

HACIENDAS DEL RIO UNIT ONE
 BEING A PORTION OF TRACTS 98 AND 901 AND ALL OF
 TRACT 9C AND A 90 FOOT COUNTY ROW, BLOCK 16
 UPPER VALLEY SURVEYS
 EL PASO COUNTY, TEXAS
 CONTAINING 33.5014 ACRES



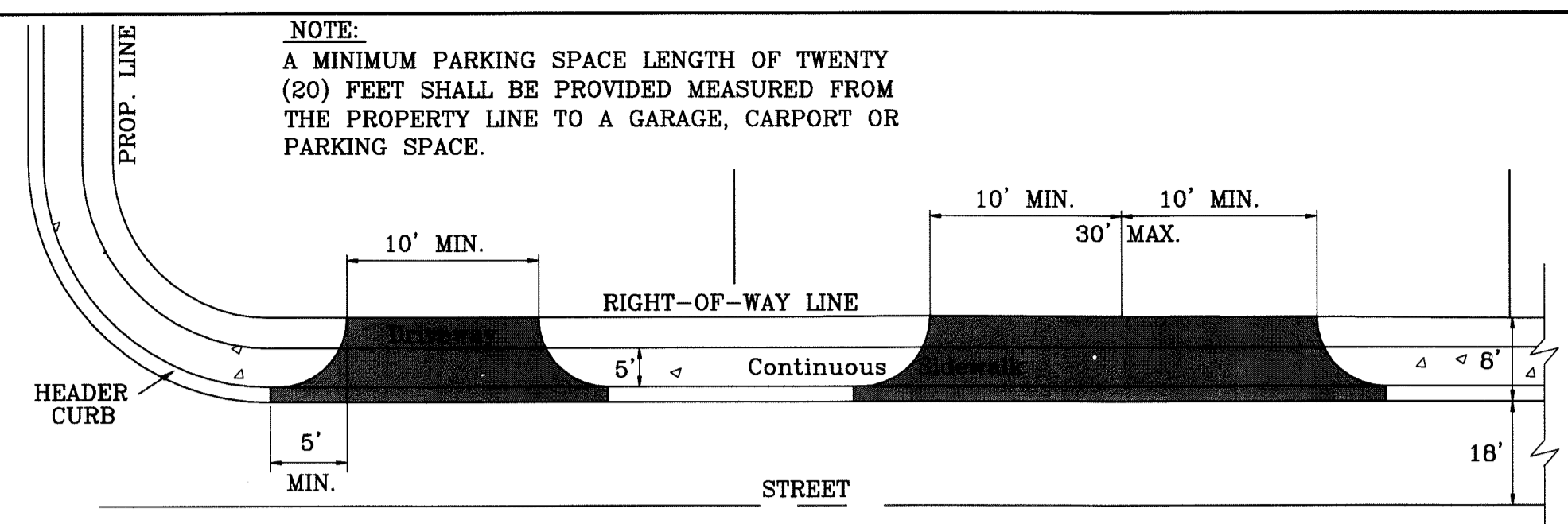
CIVIL ENGINEERING SERVICES
 ALI BOURLESIAN
 P.E. #57915 - FIRM #005017
 3616 MGRAE, SUITE A
 EL PASO, TEXAS 79905
 PH: 915-591-3312



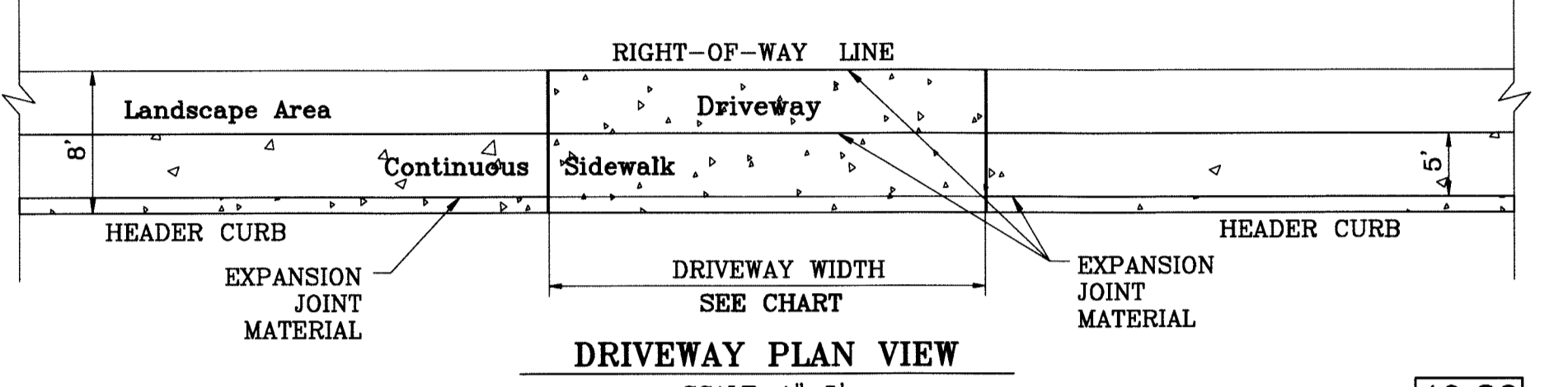
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 DATE: JANUARY 12, 2015
 SHEET TITLE: STREET PLAN-PROFILE
 STRAHAN ROAD
 STA: 31+00 TO 38+39.17
 SHEET: C-21
 PAGE: 21
 OF: 24

TOPOGRAPHY AS PER ROBERT SEIPEL ASSOCIATES, INC. PROFESSIONAL LAND SURVEYORS.

Final Approval



RESIDENTIAL DRIVEWAYS TYPICAL
AS PER CITY DESIGN STD. # 6-7.
N.T.S.



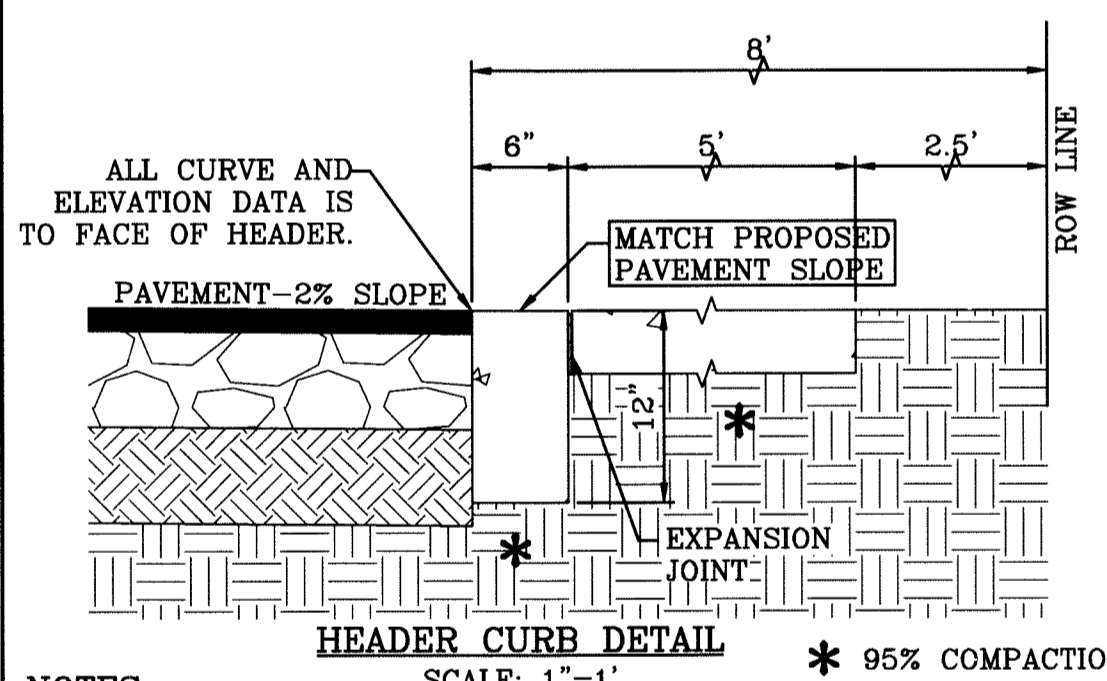
10% MAX SLOPE FIRST
3-5 FEET 14% MAX
THEREAFTER (VARIES)

2% MAX.
5' SIDEWALK
HEADER CURB
PAVEMENT

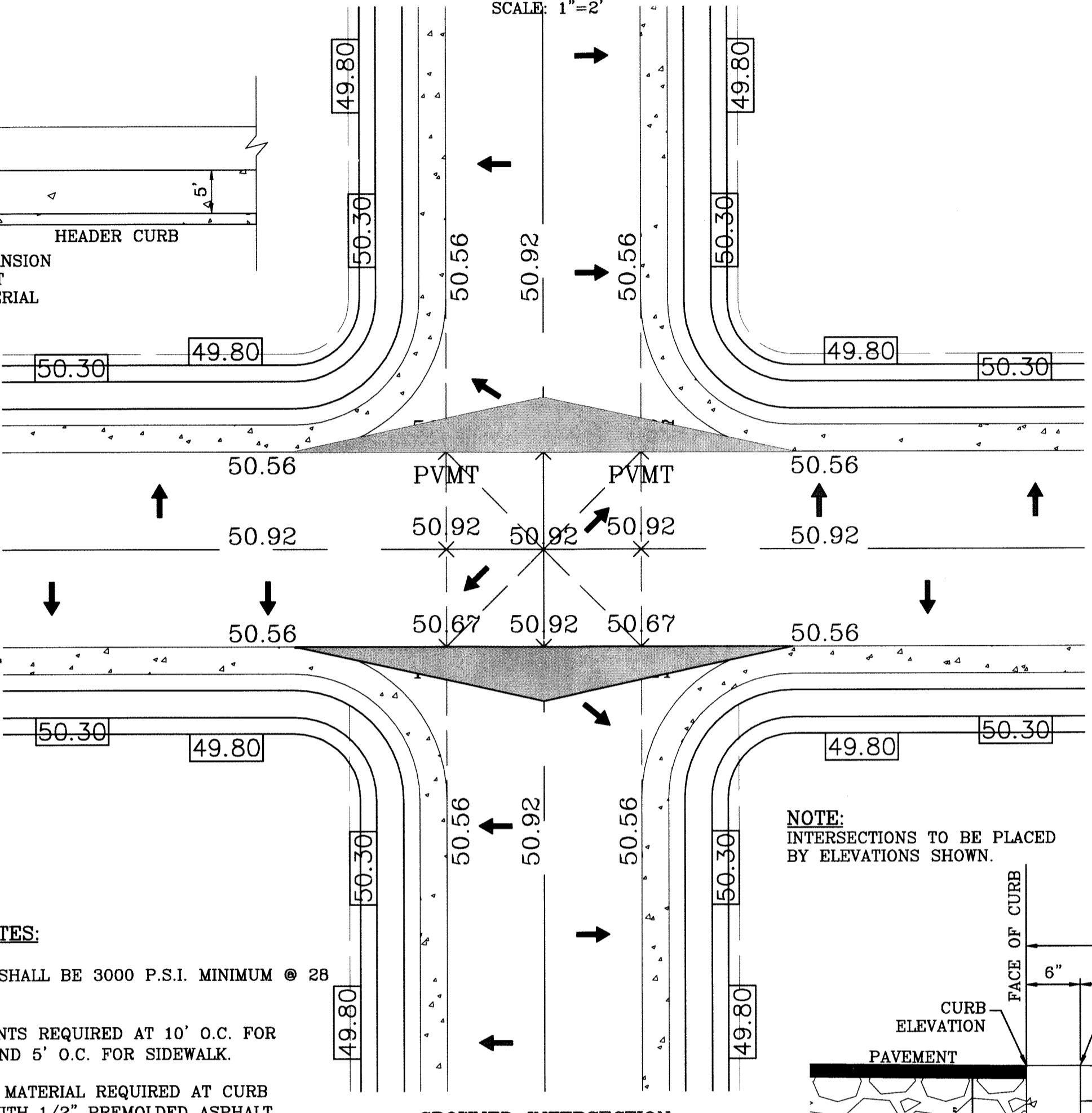
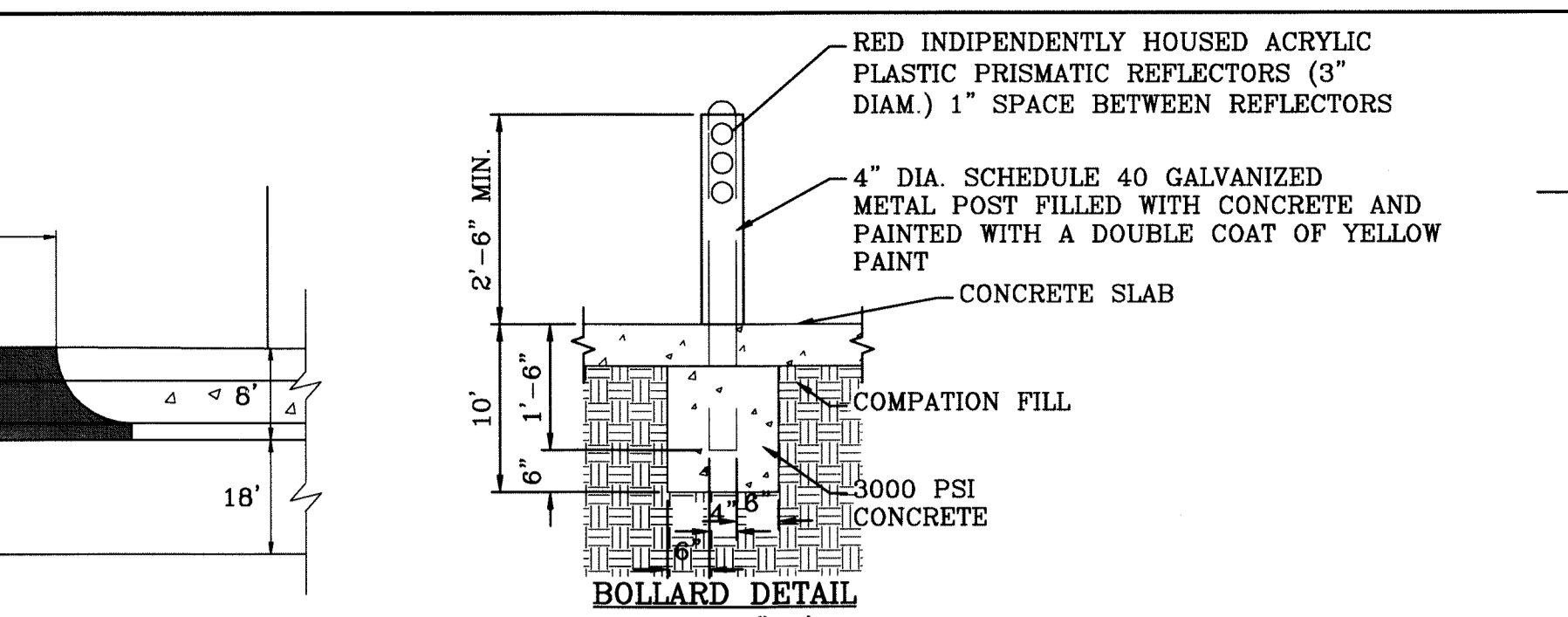
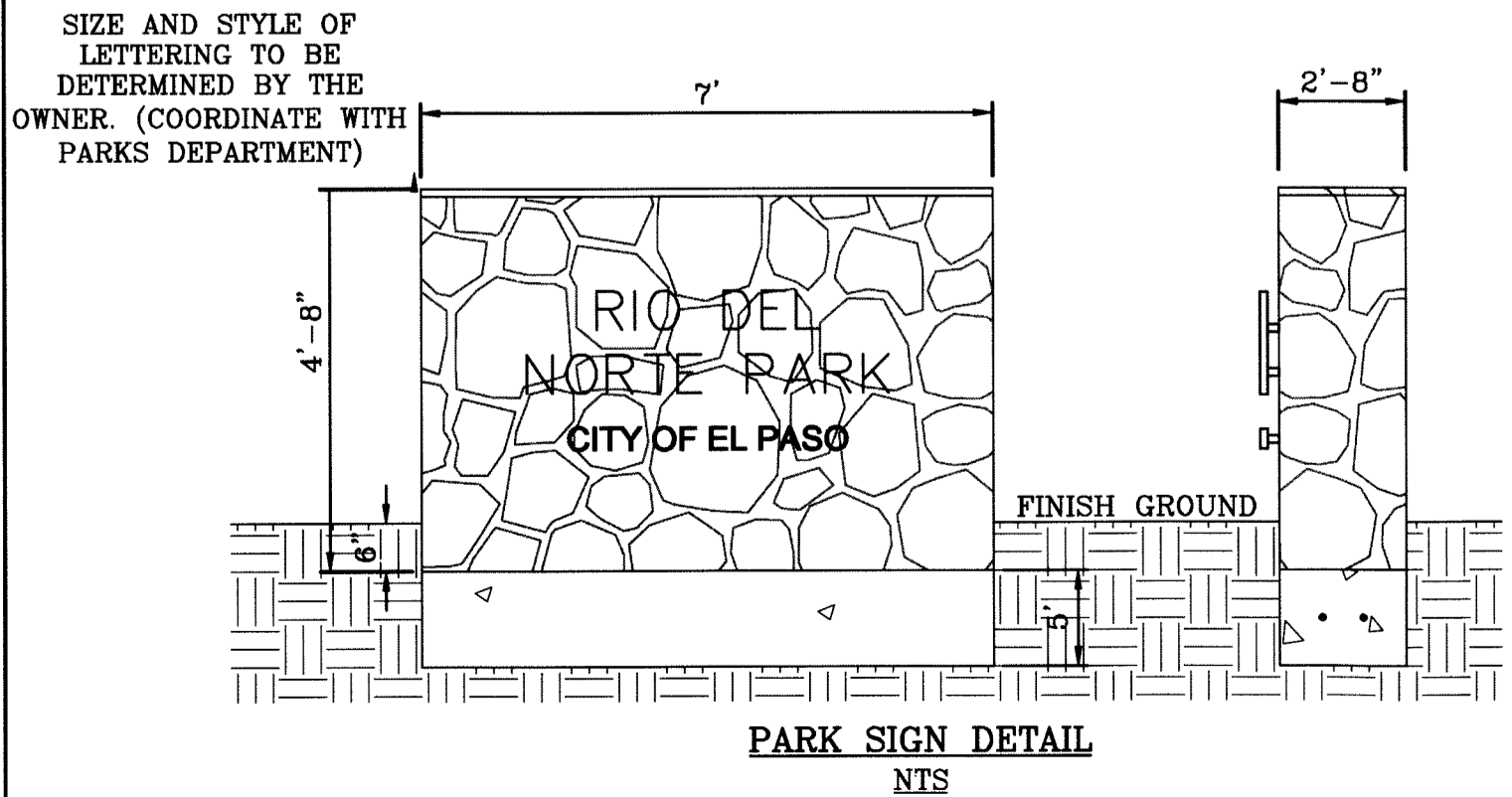
EXPANSION JOINT MAT'L (1/2" APPROVED)
COMPACTION ON DRIVEWAY
95% NON-COESIVE
90% COESIVE

6" CONC. WITHOUT W.W.F
4" CONC. WITH 6x6-10/10 W.W.F

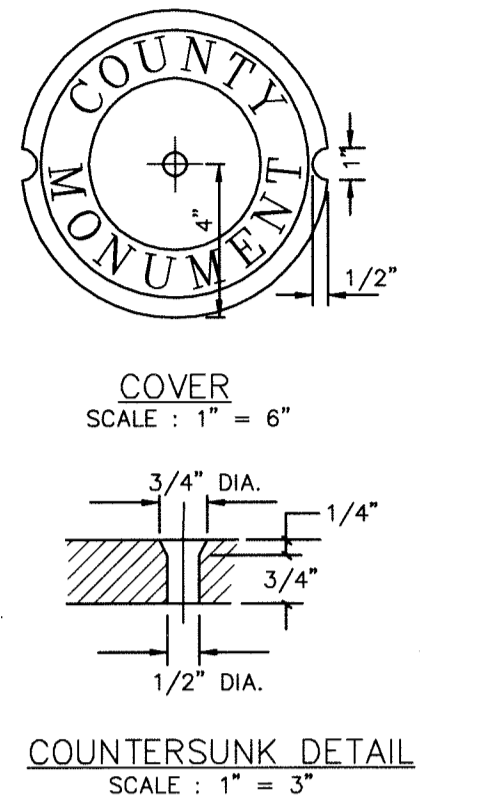
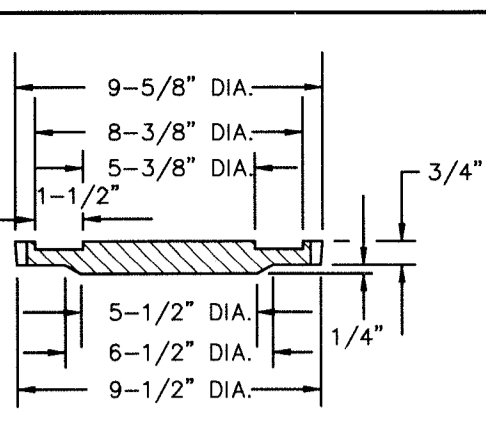
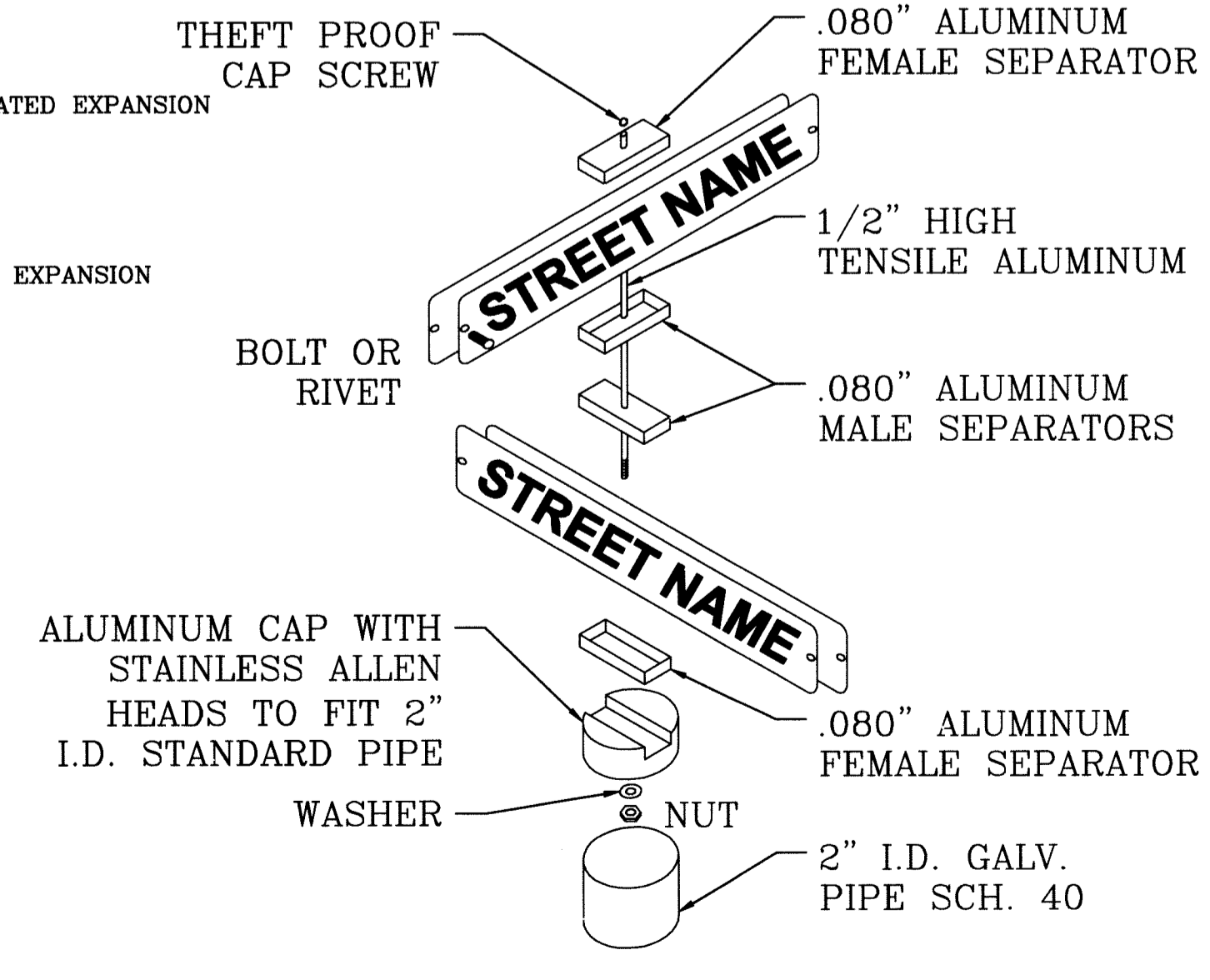
RESIDENTIAL DRIVEWAY SECTION (TYPICAL)
AS PER CITY DESIGN STANDARD 6-18
N.T.S.



- NOTES:**
- CONCRETE SHALL BE 3000 P.S.I. MINIMUM @ 28 DAYS.
 - DUMMY JOINTS REQUIRED AT 10' O.C. FOR HEADERS AND 5' O.C. FOR SIDEWALK.
 - EXPANSION MATERIAL REQUIRED AT CURB RETURNS WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
 - EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR HEADERS.
 - WHENEVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS, EXPANSION JOINT FILLER SHALL BE USED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.



NOTE:
INTERSECTIONS TO BE PLACED BY ELEVATIONS SHOWN.



SIZE AND CONSTRUCTION:
THE STANDARD COUNTY MONUMENT SHALL BE POURED-IN-PLACE CONCRETE CONE. EIGHT (8) INCHES MINIMUM DIAMETER AT THE TOP, EIGHTEEN (18) INCHES MINIMUM DIAMETER AT THE BOTTOM, THIRTY-SIX (36) INCHES MINIMUM IN DEPTH WITH THE MONUMENT CAP IN PLACE ON TOP.
THE MONUMENT SHALL BE COVERED WITH A CAST IRON BOX AND COVER.

NUMBER AND LOCATIONS:
THE MONUMENTS SHALL BE INSTALLED WHERE SHOWN ON THE SUBDIVISION PLAT AS APPROVED BY THE COUNTY ENGINEER.

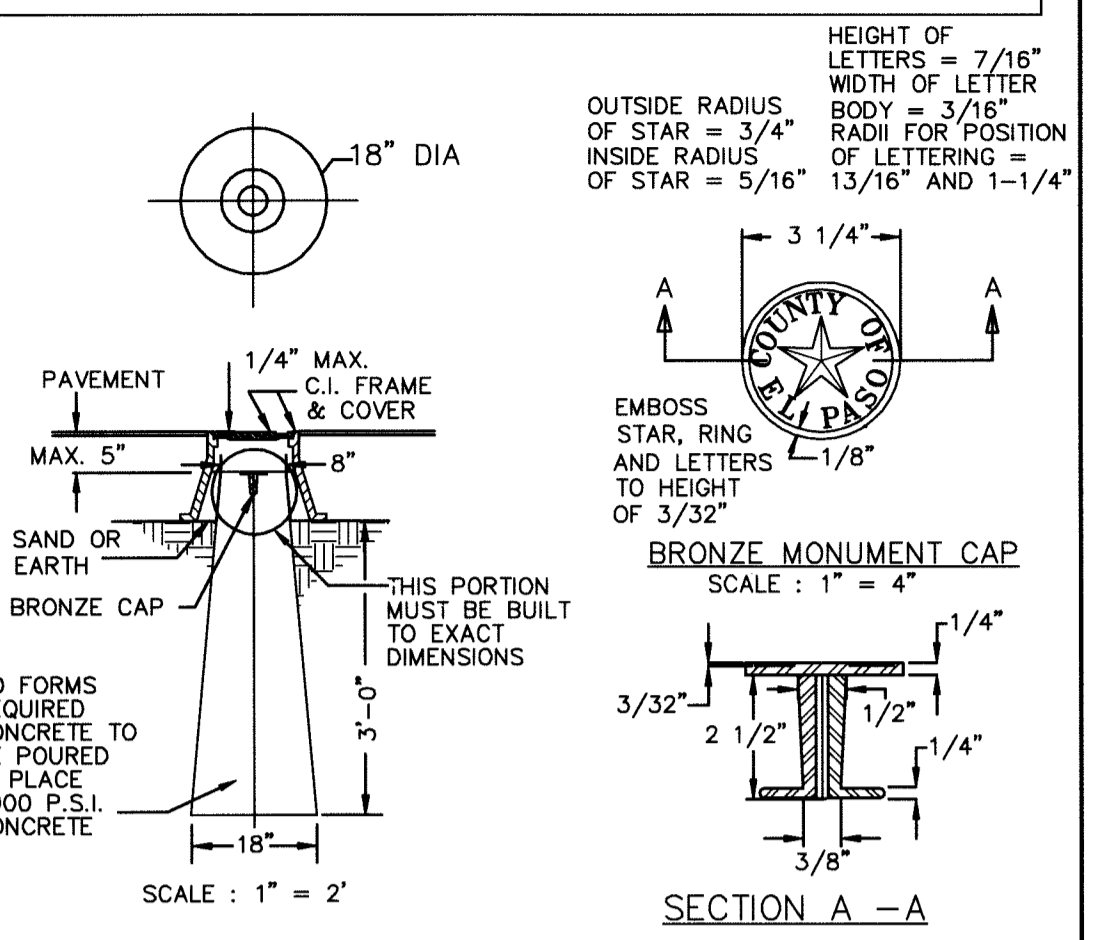
ANY MONUMENT MUST BE WITHIN THE LINE OF SIGHT OF ANY OTHER MONUMENT (2000 FEET MAXIMUM DISTANCE BETWEEN MONUMENTS).
THE SIZE, TOPOGRAPHY AND LAYOUT OF THE SUBDIVISION SHALL GOVERN THE NUMBER OF MONUMENTS REQUIRED.

NO FEWER THAN TWO MONUMENTS SHALL BE PLACED IN A ONE STREET SUB-DIVISION.
AT LEAST ONE (1) MONUMENT SHALL BE PLACED ON EACH HORIZONTAL CURVE. TWO SHALL BE PLACED IF THE POINT OF INTERSECTION (P.I.) OF THE TANGENTS LEADING INTO THE CURVE FALLS OUTSIDE OF CITY RIGHT-OF-WAY.
MONUMENTS SHALL BE INSTALLED SO THAT ALL FRONT PROPERTY CORNERS OF ALL LOTS IN THE SUBDIVISION ARE WITHIN LINE OF SIGHT OF A MONUMENT, OR WITHIN SIGHT OF LINE BETWEEN TWO ADJACENT MONUMENTS.

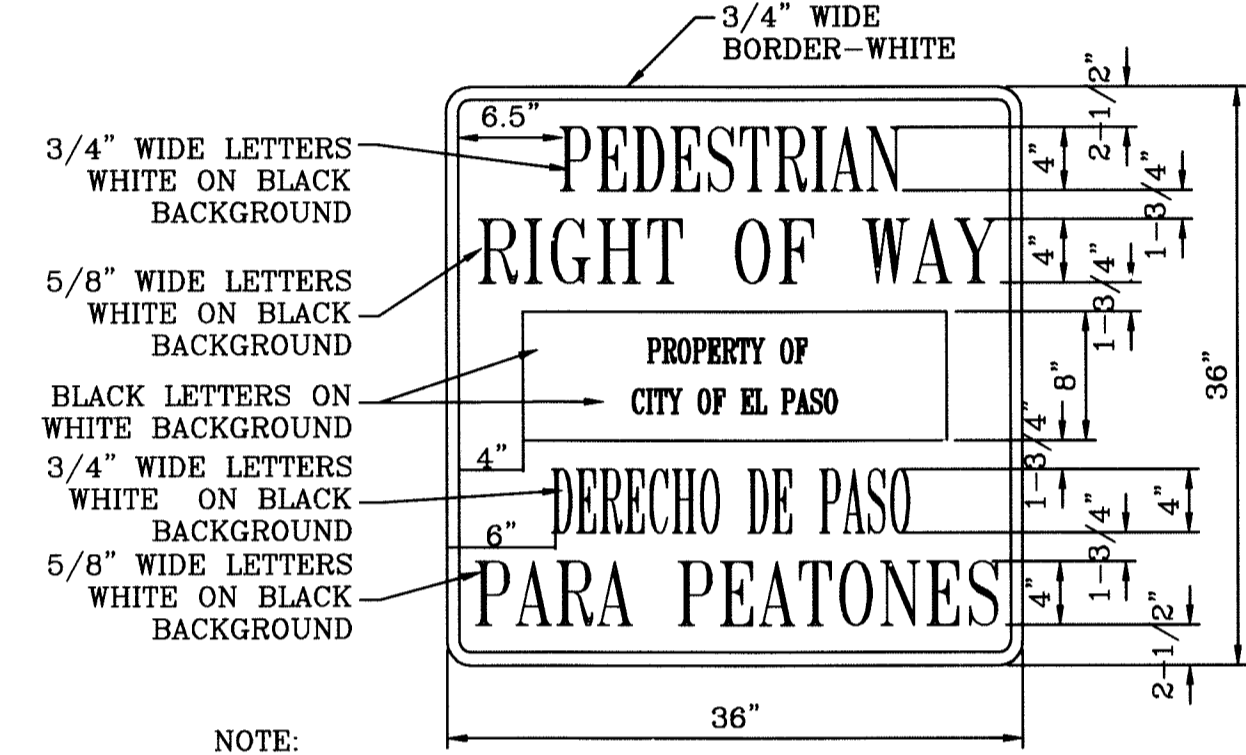
HEIGHT OF LETTERS = 7/16"
WIDTH OF LETTER BODY = 3/16"
RADI FOR POSITION OF LETTERING = 13/16" AND 1-1/4"

EMBOSS STAR, RING AND LETTERS TO HEIGHT OF 3/32"

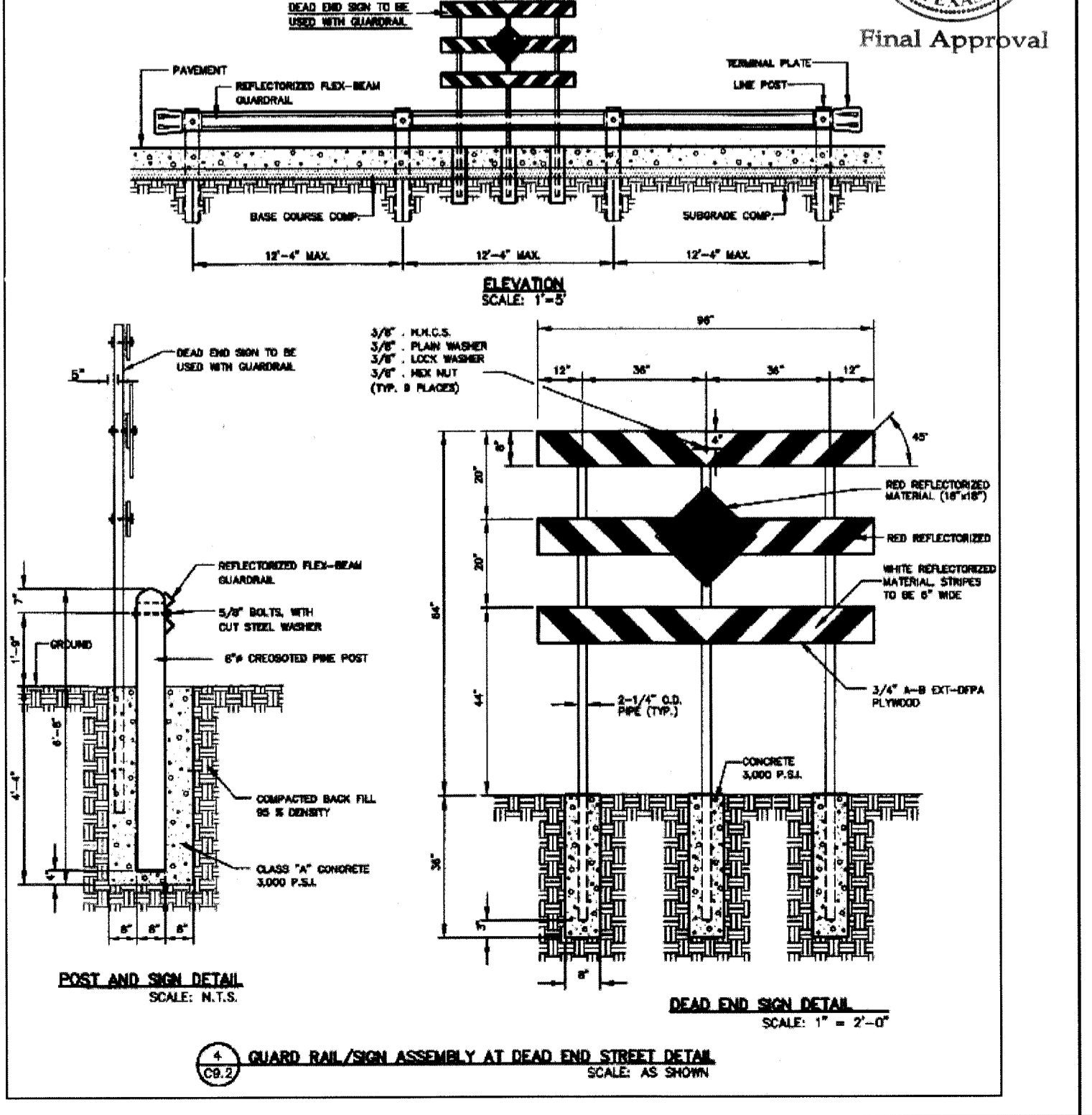
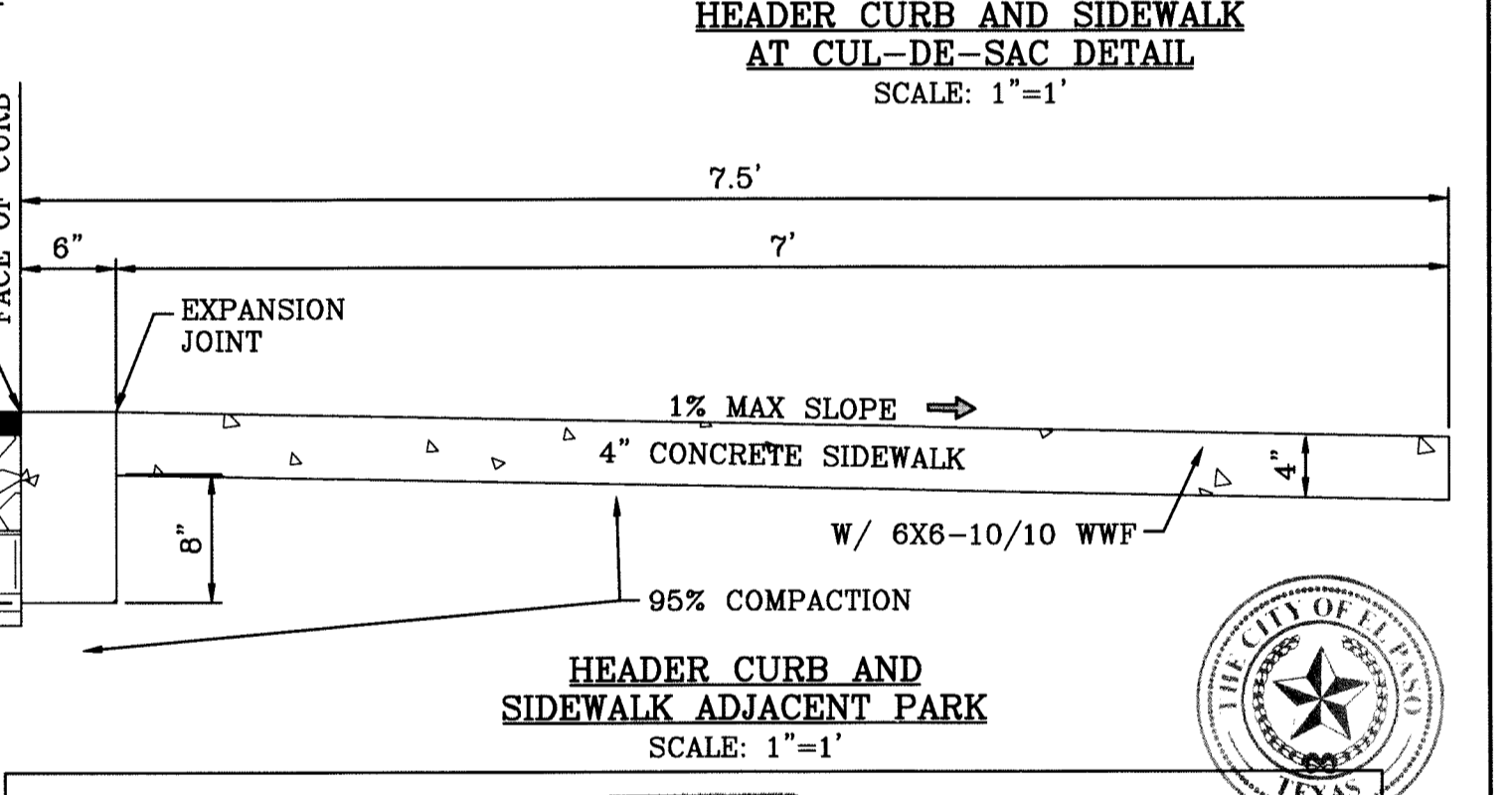
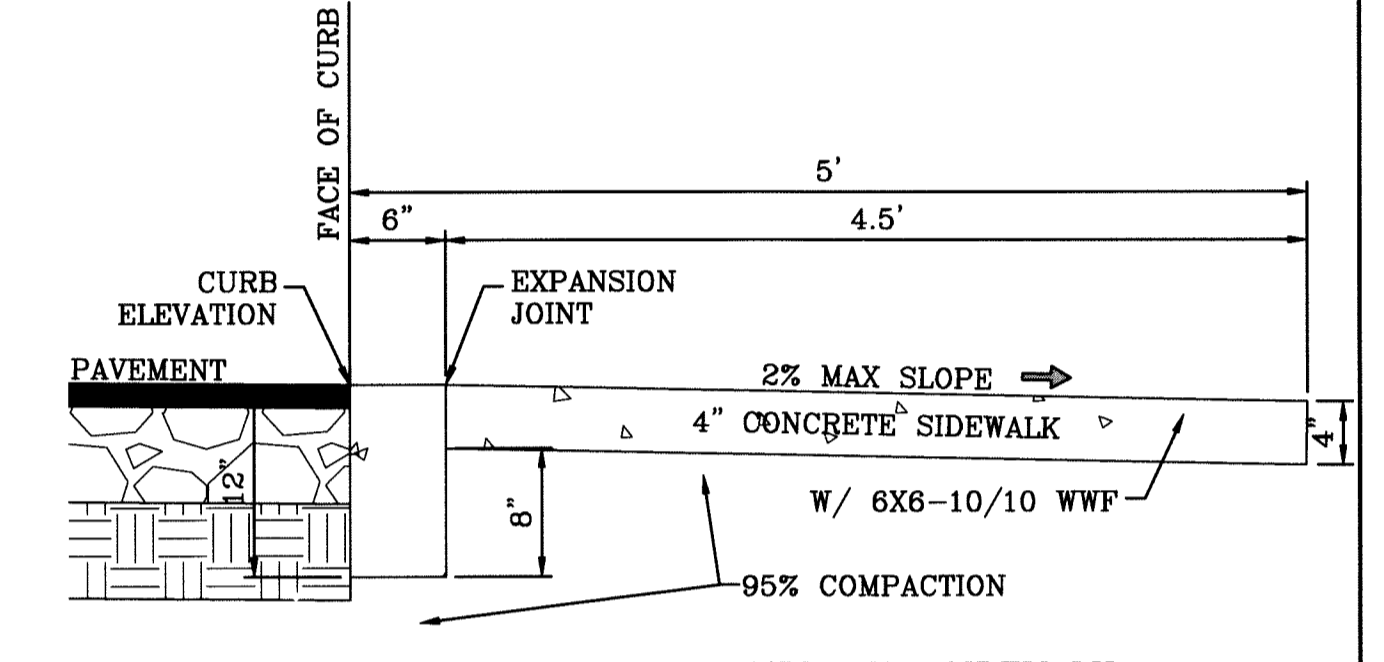
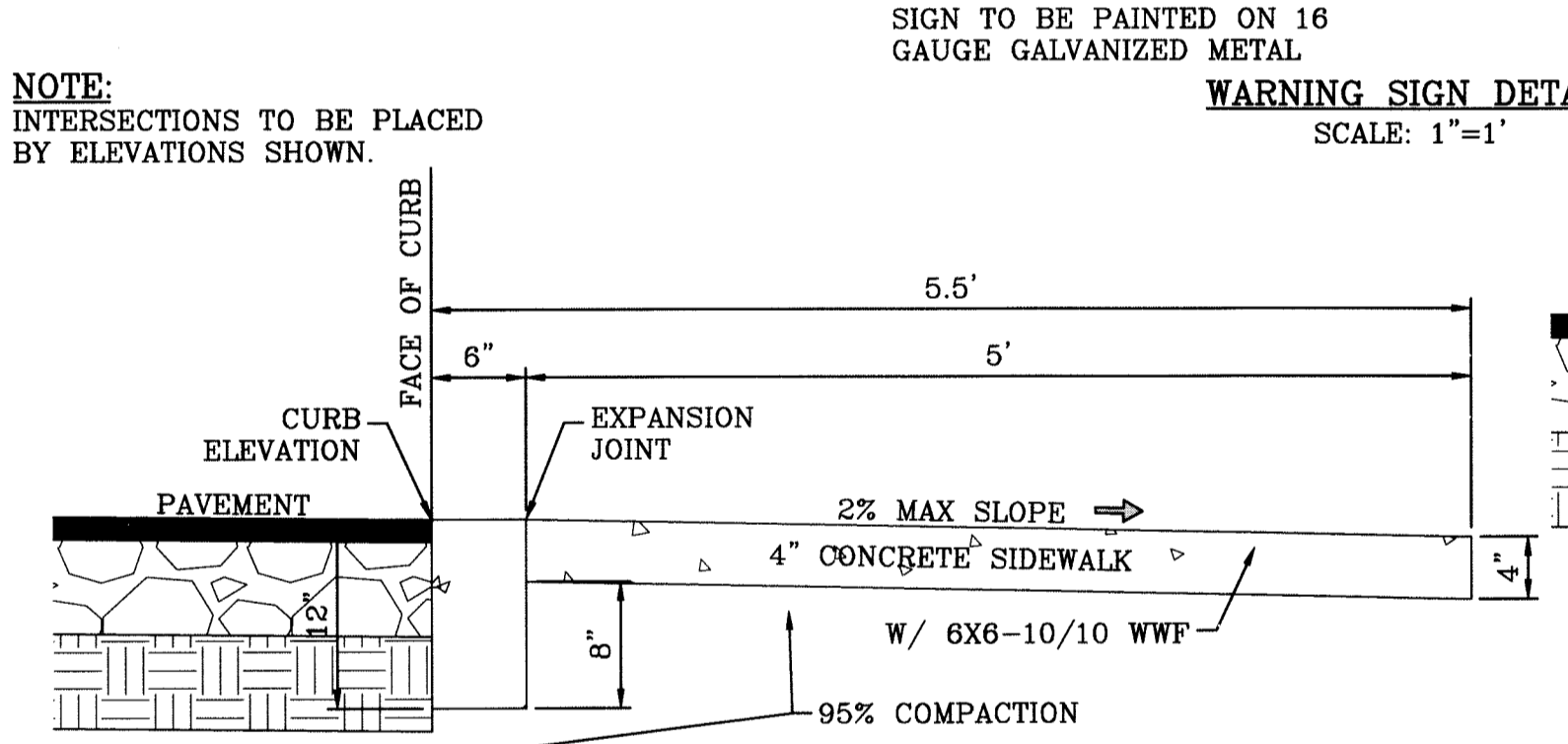
BRONZE MONUMENT CAP
SCALE: 1"=4'



COUNTY MONUMENT DETAIL
COUNTY MONUMENT AS PER STANDARDS



NOTE:
SIGN TO BE PAINTED ON 16 GAUGE GALVANIZED METAL



ENGINEER'S SEAL
CIVIL ENGINEER
4S ENGINEERING SERVICES
ALLIANCE ENGINEERING
A.P. Bourleslan
P.E.#57915 - FIRM#005017
3616 McRAE, SUITE A
EL PASO, TX 79925
PH#915-591-3312

HACIENDAS DEL RIO UNIT ONE
BEING A PORTION OF TRACTS 38 AND 391 AND ALL OF TRACT 38 AND A 30 FOOT COUNTY ROW, BLOCK 16
UPPER VALLEY SURVEYS
EL PASO COUNTY, TEXAS
CONTAINING 38.504 ACRES

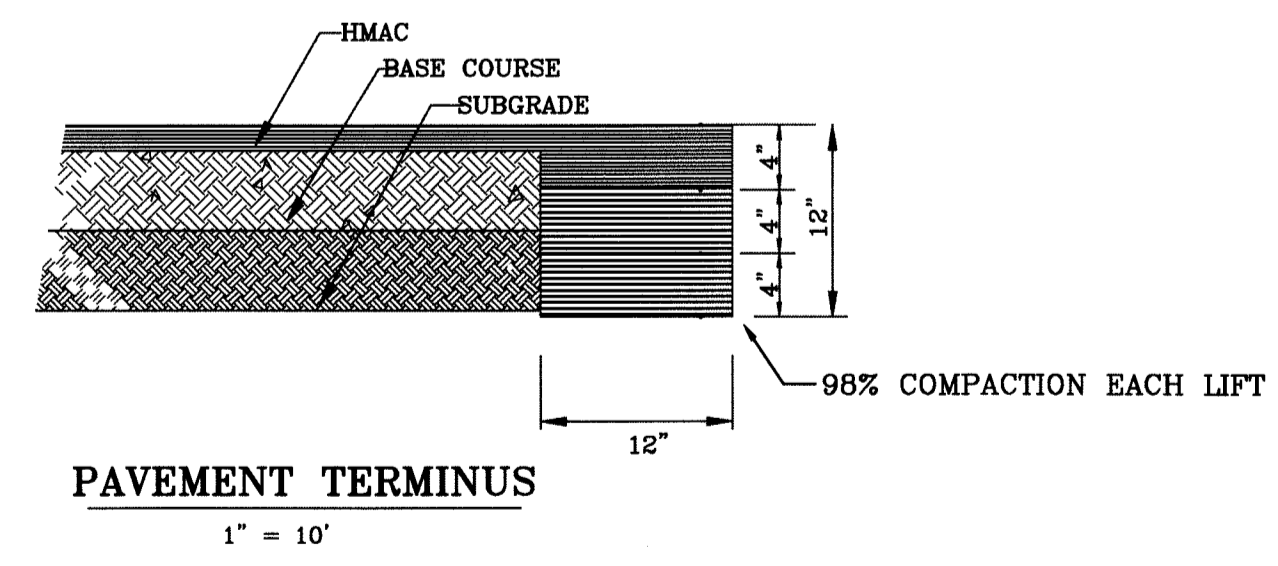
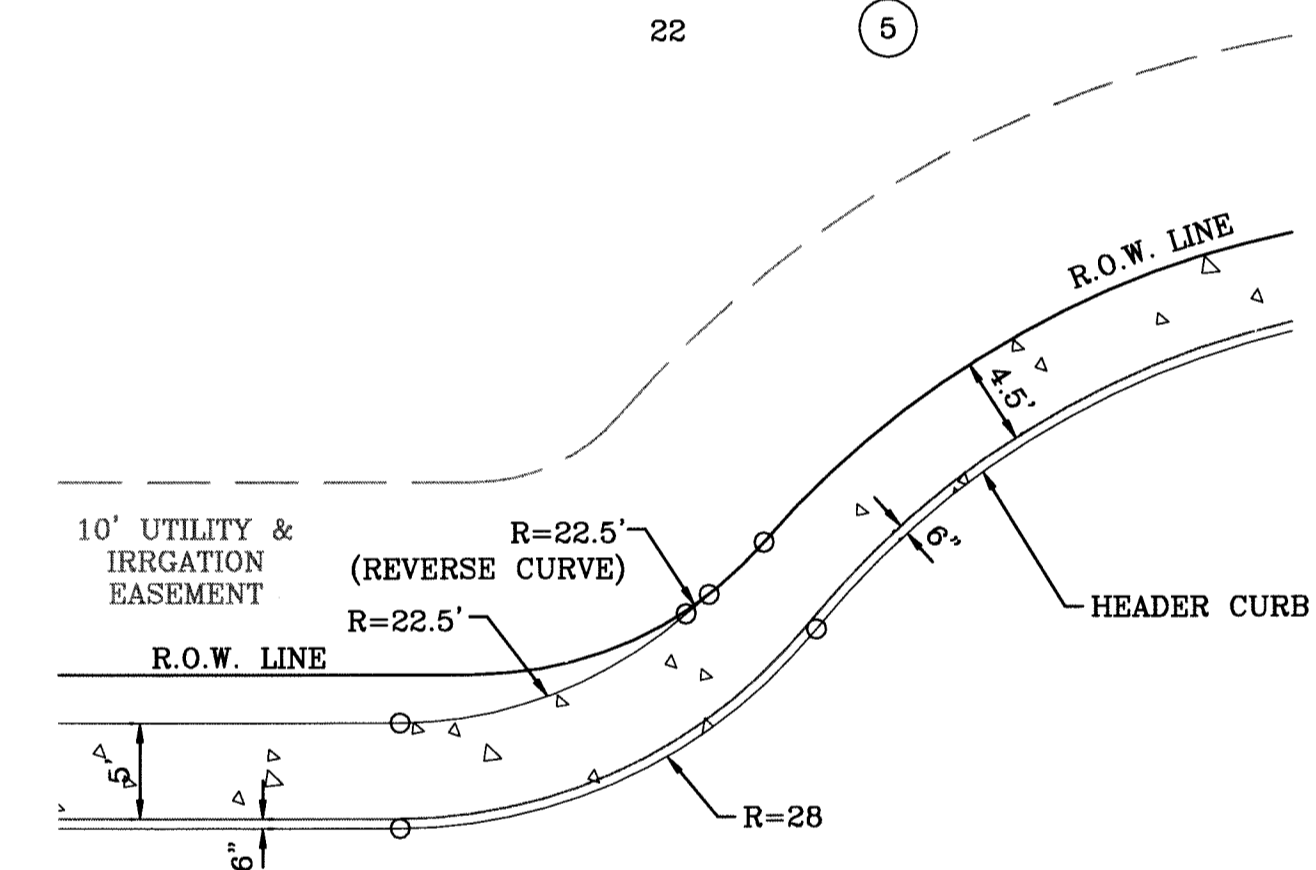
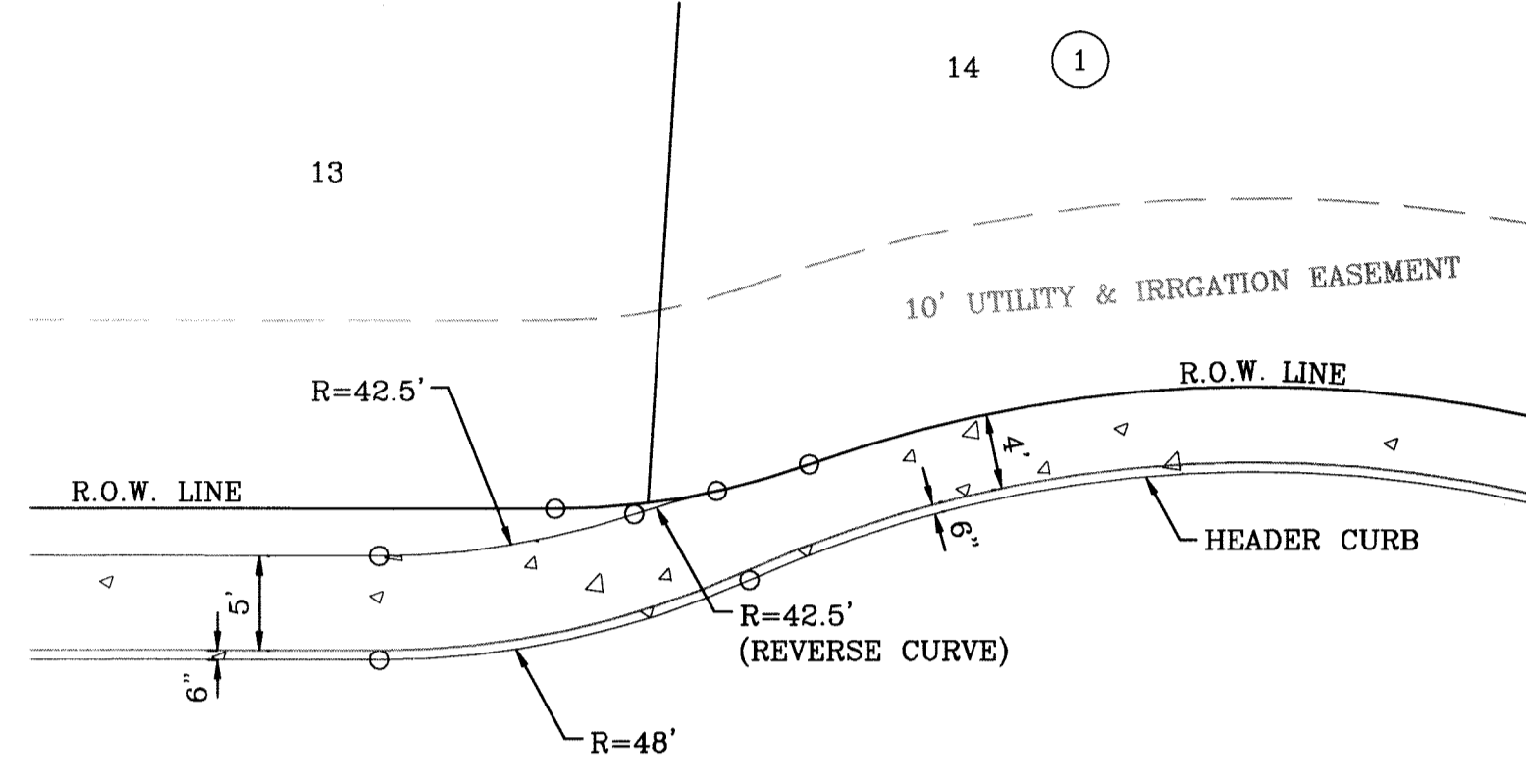
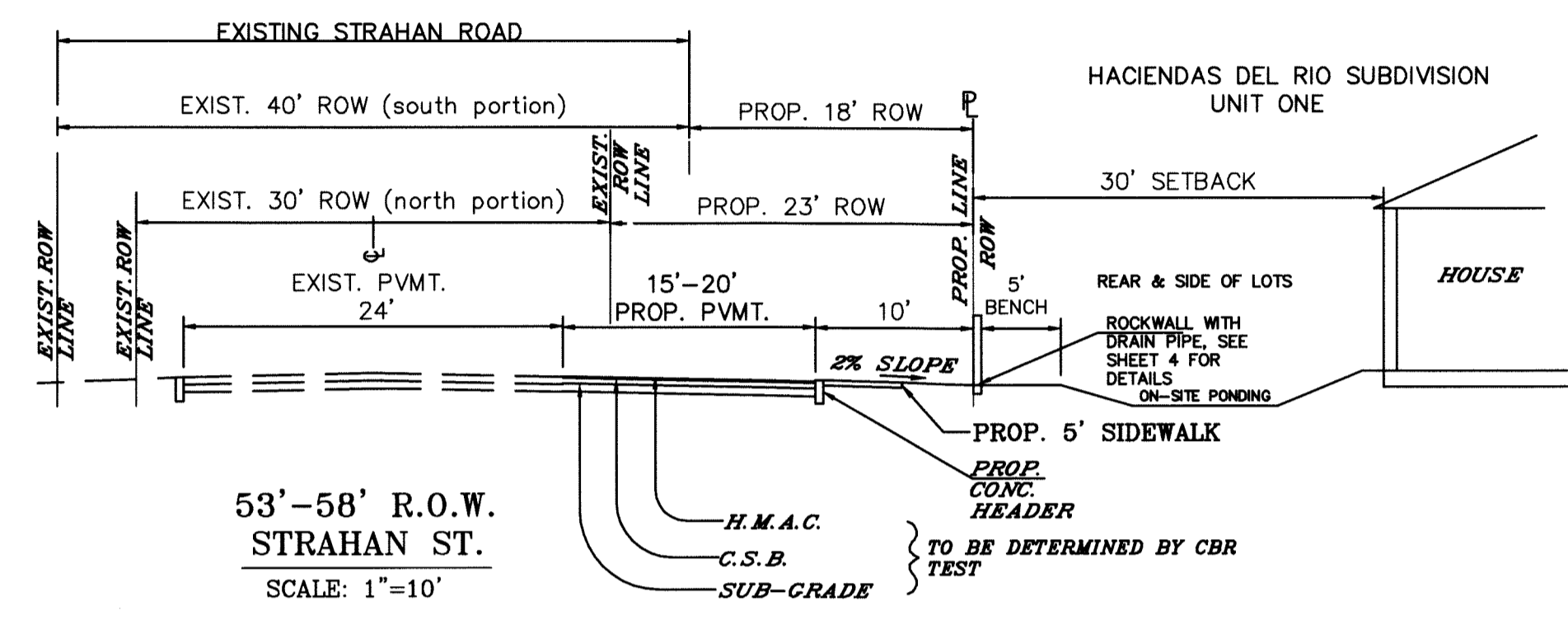
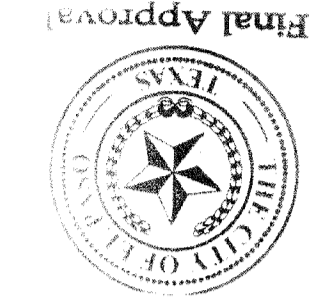
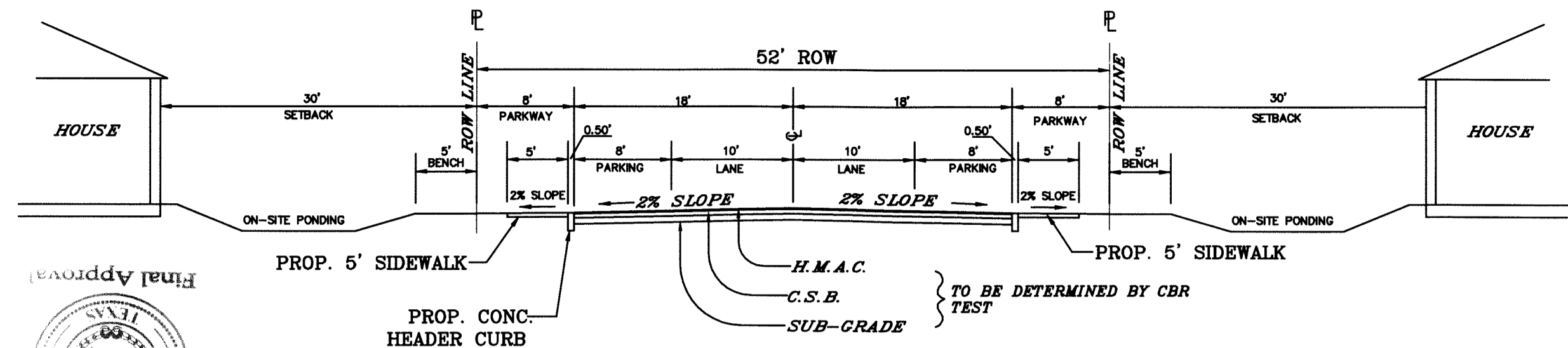
6/5/12
A.P. Bourleslan
P.E.

ENGINEER'S SEAL
CIVIL ENGINEER
4S ENGINEERING SERVICES
ALLIANCE ENGINEERING
A.P. Bourleslan
P.E.#57915 - FIRM#005017
3616 McRAE, SUITE A
EL PASO, TX 79925
PH#915-591-3312

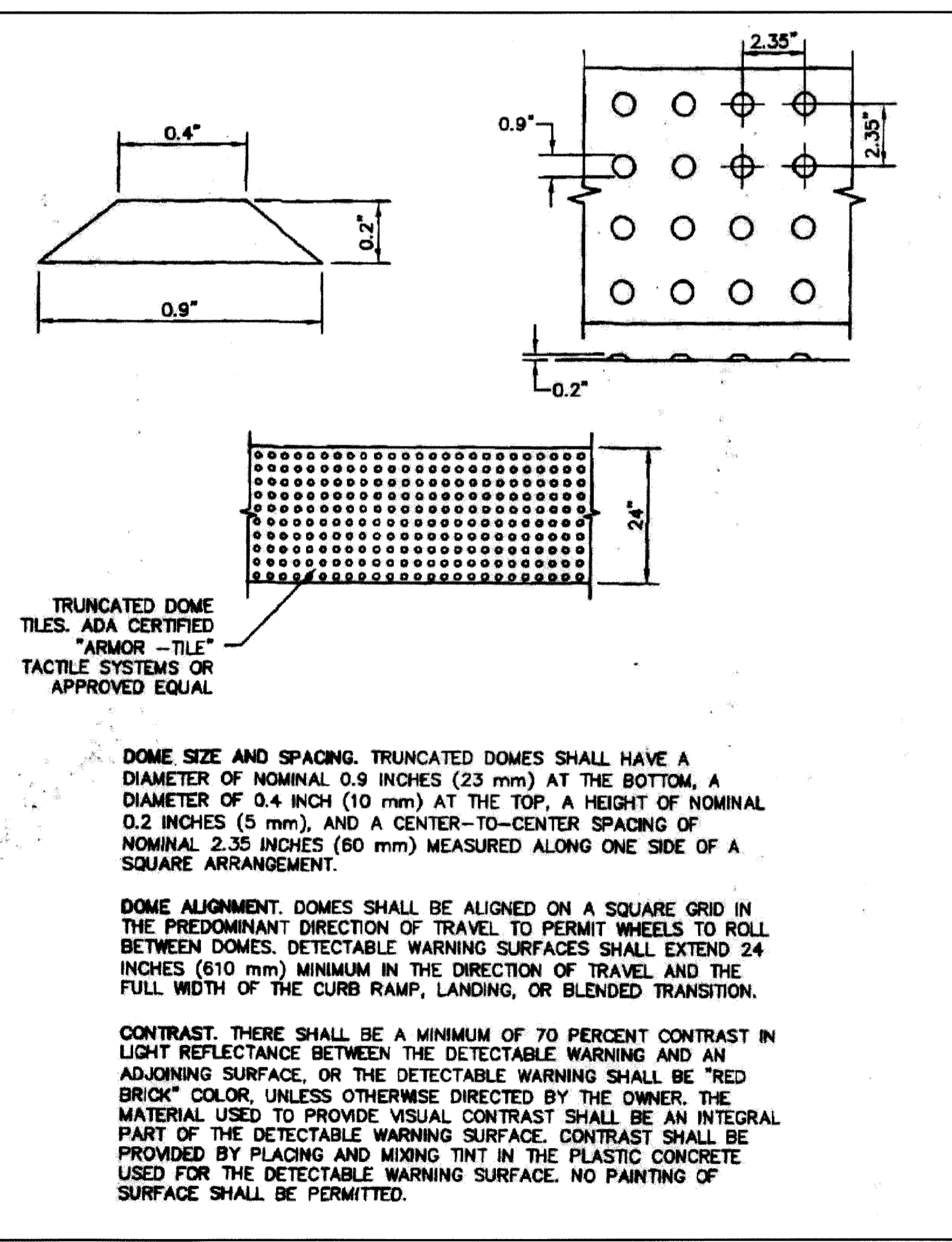
DRAWN BY: EA
CHECKED BY: CJ
PROJECT NO. HACIENDAS 1
DATE: JANUARY 12, 2015
SHEET TITLE:

STANDARD DETAILS

PAGE: 22
OF: 24



NOTE:
THICKENED EDGE SHALL BE CONSTRUCTED IN COURSED NOT OVER 4" IN THICKNESS, EACH COURSE THOROUGHLY COMPACTED BEFORE PLACING NEXT COURSE, FINAL COURSE TO BE PLACED MONOLITHIC WITH PAVEMENT.



Turned-Down Slab Foundation Recommendations
We recommend that the new residential buildings be supported on a turned-down foundation poured monolithically with the slab. This foundation system should be built on a minimum of 24 inches of compacted structural fill below the bottom of the thickened section of the slab. The surface on which fill materials will be placed should be scarified to a minimum depth of 10 inches and compacted as specified in the following sections.

The foundation system should be designed based on an allowable soil bearing capacity of 1,500 pounds per square foot. The thickened section of the slab should have a minimum width of 18 inches, and should bear at a minimum depth of 18 inches below the lowest adjacent finished grade, on a minimum of 24 inches of compacted structural fill, for a total estimated settlement of less than one inch.

Residential Homes
Allowable Soil Bearing Capacity: 1500 lb/ft²
Effective Plasticity Index (PI): 58
Minimum Perimeter Footing Width: 18 inches
Minimum Perimeter Footing Depth (below finished floor elevation): 18 inches
Minimum Interior Footing Width: 18 inches
Minimum Interior Footing depth (below finished floor elevation): 18 inches

Floor Slabs
Conventional floor slabs should be built on a minimum of 24 inches of compacted structural fill. A modulus of subgrade reaction of 125 pounds per cubic inch may be used for backfill materials in the design of floor slabs for the residential buildings.

Flexible Pavements
Based on the Potential Vertical Rise (PVR) calculations, the maximum PVR value of the theoretically dry soil profile was 2 1/2 inches. A California Bearing Ratio (CBR) value of 3 was used for pavement design calculations.

Street Classification: Residential Sub-Collector
Equivalent Axle Load (20 years) = 269,000
Design CBR Value = 3

Pavement Component	Minimum Thickness (inches)
Hot Mix Asphaltic Concrete	2
Crushed Stone Base Course	8
Compacted Structural Fill	26
As an alternative:	
Hot Mix Asphaltic Concrete	1 1/2
Crushed Stone Base Course	6
Compacted Structural Fill	30

OR TO BE DETERMINED BY CBR TEST

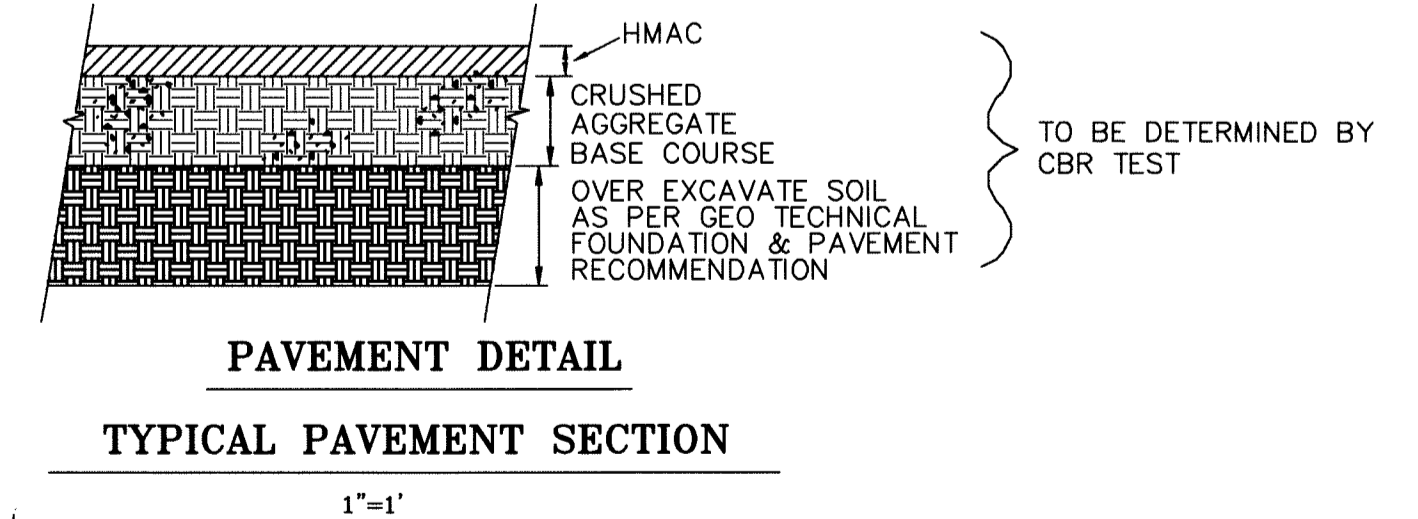
As a minimum, the HMAc material should conform to Type C, in accordance with the TxDOT standards. The HMAc mix should have a minimum of 1500 pounds of Marshall stability when compacted at 75 blows in accordance with ASTM D 1559, and should have a flow between 8 and 16. The HMAc course should be placed at a target density of at least 98 percent.

The Crushed Stone Base Course (CSBC) should be Item 247, Type A, Grade 3 in accordance with the Texas Department of Transportation (TxDOT) Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges. CSBC materials should be placed in loose lifts not exceeding 6 inches in compacted thickness, and compacted to a minimum 100 percent of maximum dry density and a moisture content within plus or minus 2 percent, in accordance with ASTM D 1557.

Structural Fill
The structural fill used to support the foundation system and flexible pavement structure should be granular, cohesion-less, and free of deleterious material and particles over 4 inches in greatest dimension. The following soils can be considered satisfactory for use as structural fill.

GM, GC, GW-GM, GW-GC, GP-GM and GP-GC, SM, SC, SW-SM, SW- SC, SP-SM, SW-SM and SC-SM.
The following USCS-classified soils are not considered satisfactory for use as structural fill. CH, CL, MH, ML, OH, OL and PT, or soils that exceed a liquid limit of 35 and a plasticity index of 15.

Structural fill should be placed in uniform layers not exceeding 8 inches in compacted thickness, moisture-conditioned to add the amount of moisture required for optimum compaction and compacted to a minimum of 95 percent of maximum density in accordance with ASTM D1557 (modified Proctor) procedures. The moisture content should be at plus or minus 3 percent of optimum moisture content in accordance with ASTM D1557. This compaction requirement also applies to the subgrade soils that will receive structural fill.



TRENCHING:
ALL TRENCHING SHALL BE DONE IN STRICT ACCORDANCE WITH OSHA-2226.



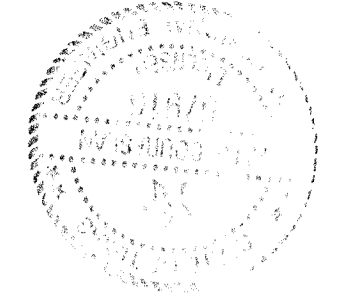
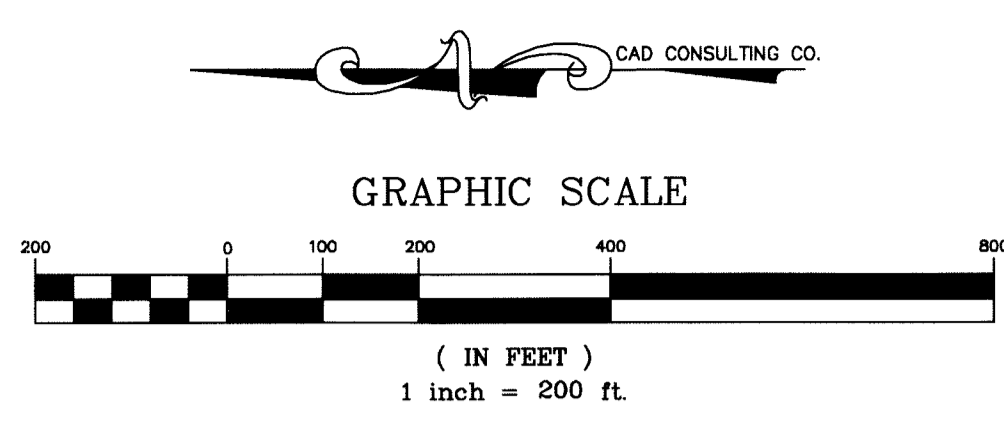
BENCHMARK:
N.S. BRASS CAP MARKER IN CONCRETE 4'-27" WITH
LATITUDE OF 31°53'40", LONGITUDE OF 106°35'55",
ELEVATION OF 5795.37, NAD83, CITY OF EL PASO, TEXAS

HACIENDAS DEL RIO UNIT ONE
BEING A PORTION OF TRACTS 38 AND 301 AND ALL OF TRACT 3C AND A 90 FOOT COUNTY ROW, BLOCK 16
UPPER VALLEY COUNTRYSIDE
EL PASO COUNTY, TEXAS
CONTAINING 33.5014 ACRES

CIVIL ENGINEER
4S ENGINEERING SERVICES
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PH #815-591-3312

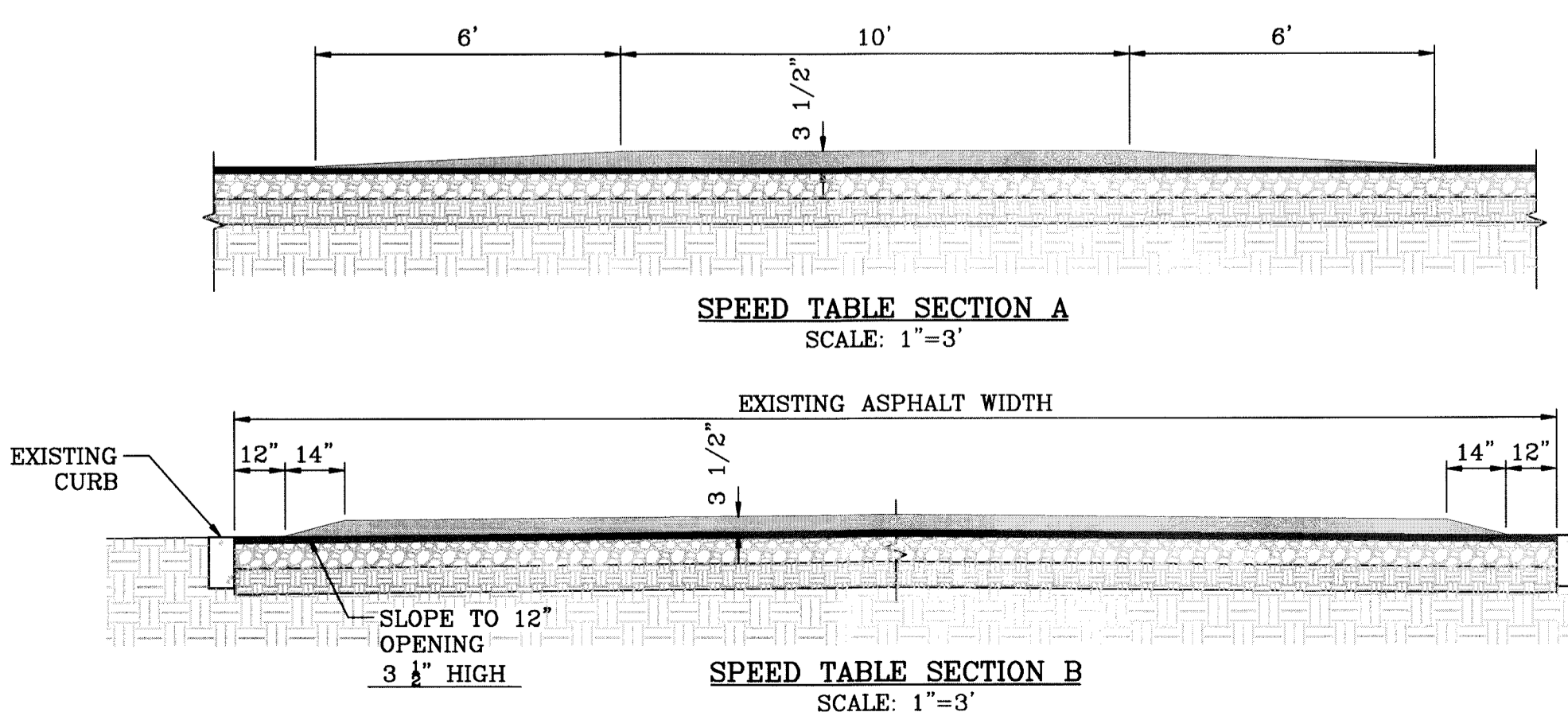
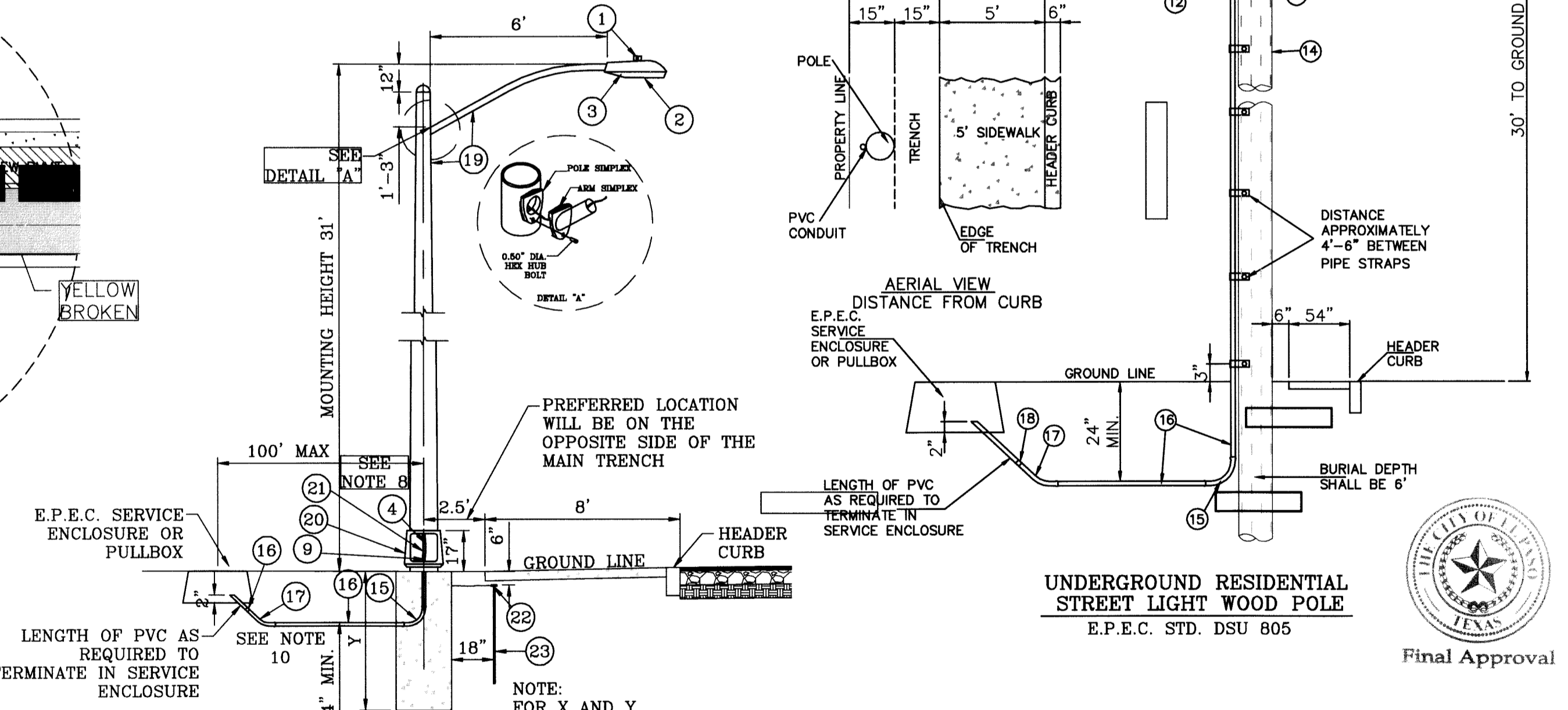
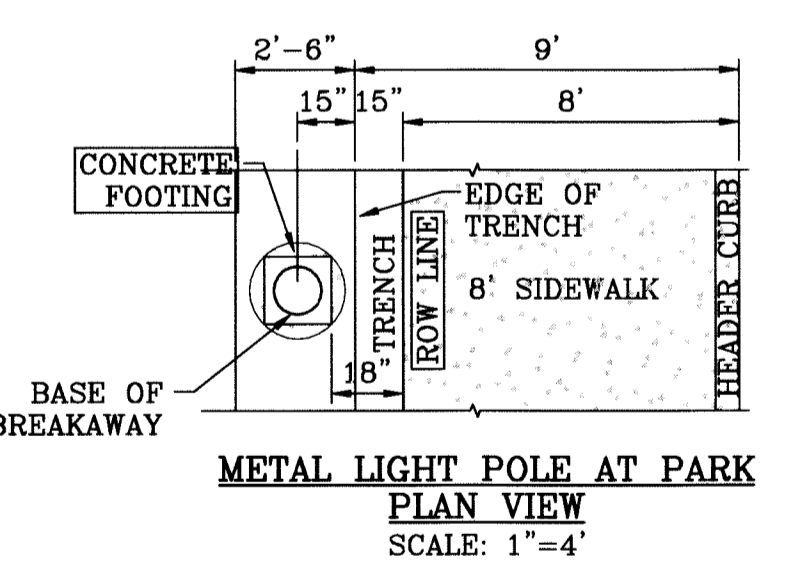
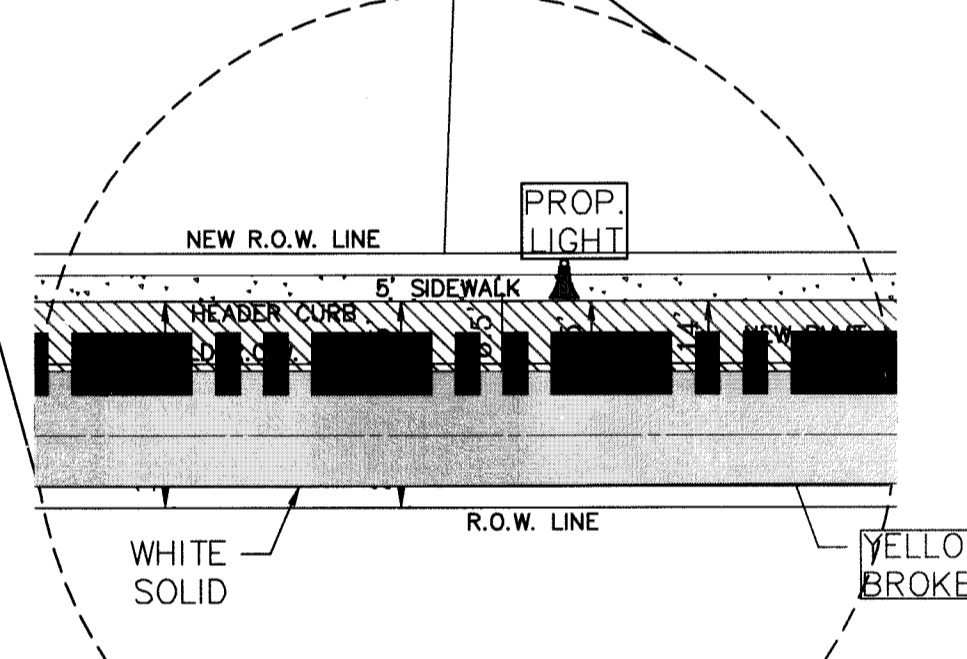
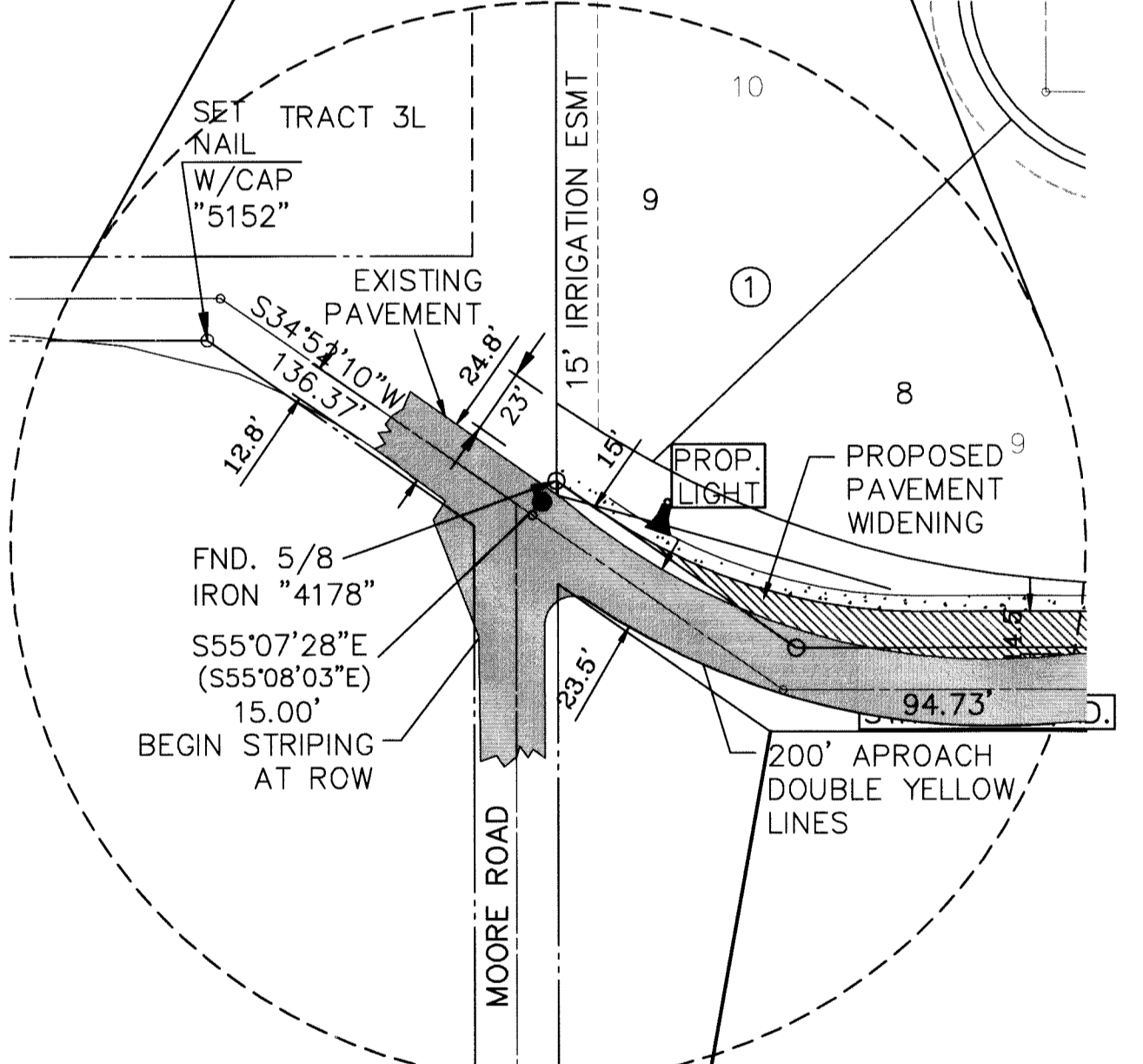
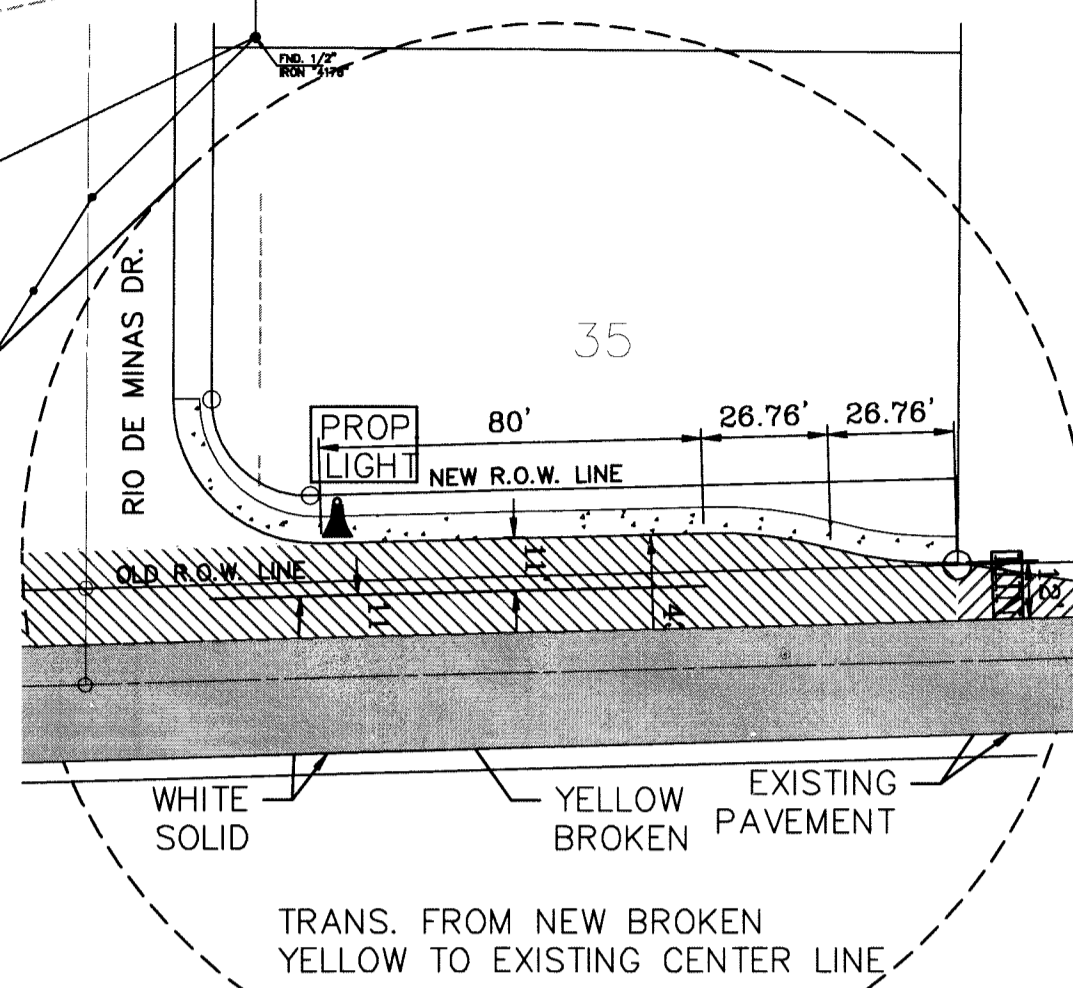
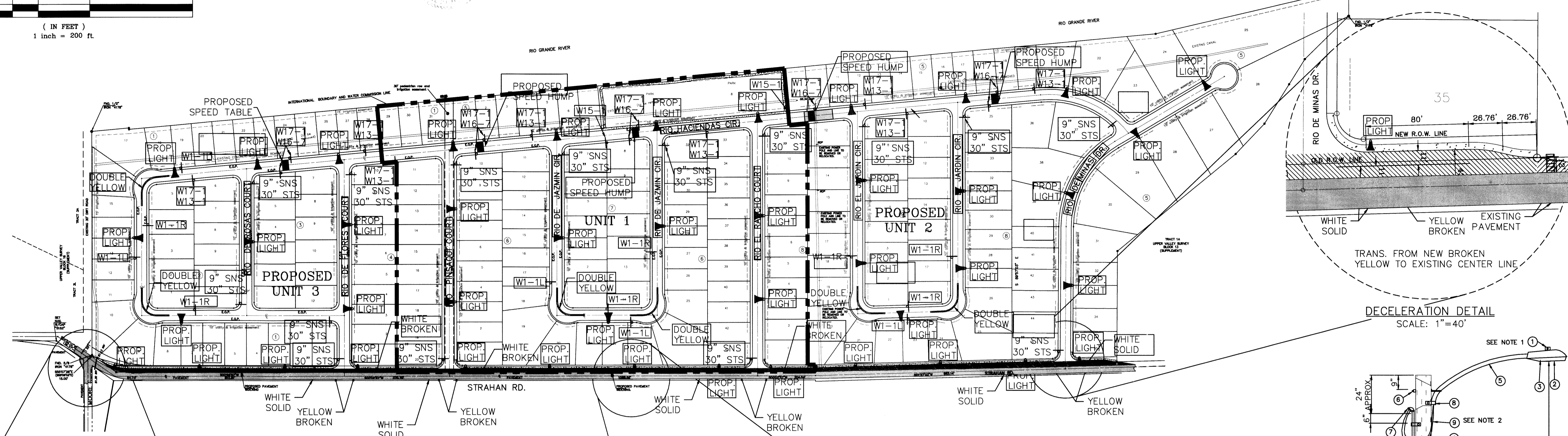
DRAWN BY: EA
CHECKED BY: CJ
PROJECT No: HACIENDAS 1
DATE: JANUARY 12, 2015
SHEET TITLE:

STANDARD DETAILS
PAGE: 23
OF: 24



LEGEND

- ▲ PROPOSED LIGHT
- * EXISTING LIGHT
- STOP SIGN WITH STREET NAME



LINEAR FEET OF CENTER LINE 12,030'
STREET LIGHTS REQUIRED 40

NOTE: STREET LIGHTING TO BE IN ACCORDANCE WITH EL PASO DESIGN STANDARDS, SECTION VIII

NOTE: INSTALL TRAFFIC CONTROL DEVICES AS SHOWN AND IN ACCORDANCE WITH CITY OF EL PASO DESIGN STANDARDS & MUTRCD, SECTION VII

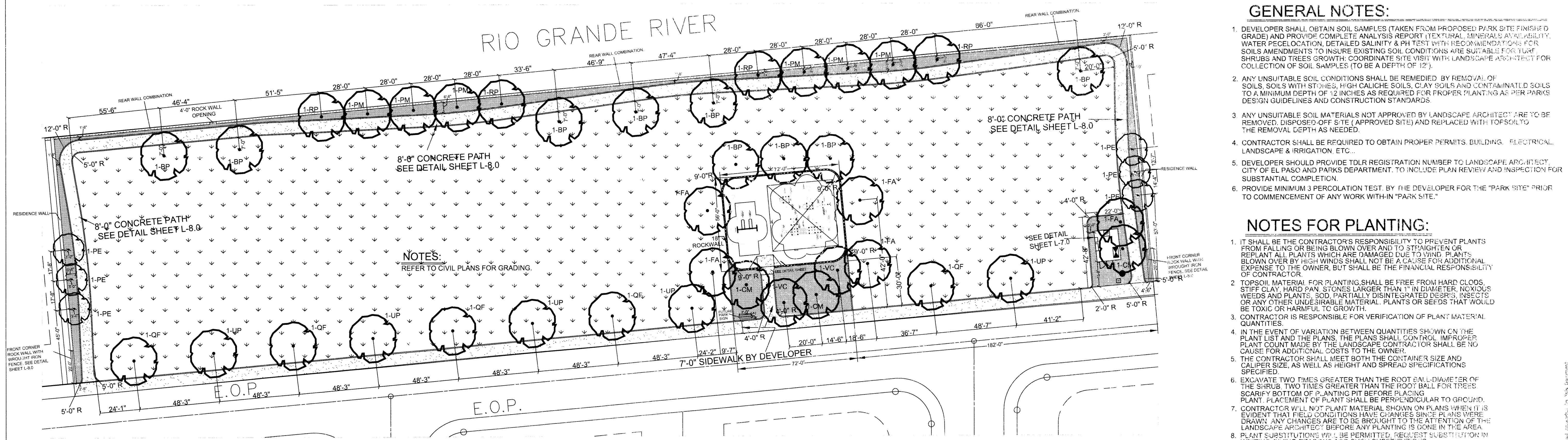
- MOUNT SO THAT PHOTO CELL IS FACING NORTH.
- ITEM #9 SHALL NOT BE SPLICED INSIDE ITEM #5.
- INSTALLATION MUST COMPLY WITH LOCAL CODE REQUIREMENTS.
- STEEL POLE TO HAVE A BREAKAWAY BASE AS REQUIRED BY THE CITY OF EL PASO.
- POLE SHALL BE GROUND AS REQUIRED BY N.E.C. LATEST EDITION.
- A GROUND ROD MUST BE USED.
- LOCK WASHER MUST BE INCLUDED ON ALL ANCHOR BOLTS.
- FOR ANY CLARIFICATION, EXCEPTIONS OR QUESTIONS REGARDING THIS STANDARD, CALL THE EL PASO ELECTRIC COMPANY DISTRIBUTION DESIGN DEPARTMENT.
- ITEM 34 SLEEVES AND ITEM #6 CABLE ARE LOCATED INSIDE THE STEEL POLE.
- FOUNDATION DIMENSIONS ARE AS FOLLOWS:
DIAMETER DEPTH
(X) (Y)
NORMAL SOIL 24" 72"
ROCKY SOIL 24" 60"
- 4-ANCHOR BOLTS WITH 4" HOOKS, THREAD END GALVANIZED 1" DIA. x 36" LONG, EACH BOLT FURNISHED WITH 2 HEX NUTS AND 2 FLAT WASHERS ARE SUPPLIED WITH THE STEEL POLE.

ITEM No.	DESCRIPTION	STOCK\DSU No.	QTY.	C/U CODE	MACRO CODE
1	PHOTOCELL, 240 V-SEE NOTE 1	21-225	1		
2	HPS LAMP, 100 W	21-085	1		
3	LUMINAIRE, 100 W HPS	21-335	1	LCOBRAHD	
4	SLEEVES, #12-10	05-140	2		
5	MAST ARM, 6' x 1 1/4"	21-200	1	LBRKT1*6	LCOBRAUG
6	MACHINE BOLT, 5/8" x 12"	02-470	1		
	SQUARE GALV. WASHER, 2 1/4"x2 1/4"	02-760	1	LMB5/812	
	COIL SPRING WASHER, 5/8"	02-786	1		
	LOCK NUT, 5/8"	02-706	1		
7	SERVICE ENTRANCE CAP FOR 1" PVC CONDUIT	17-281	1	LSVCCAP1	
8	LAG BOLT, 1/2" x 3"	02-343	2	LLAG12*3	
9	CABLE #10, 2 CONDUCTOR, 600V, UF	13-600	8'	L2C#10S	
10	COPPER CBL, #12, 19 SOLID, 600V BLUE	13-702	60'	LC#12CU	
11	SCHEDULE 80 1" PVC CONDUIT	17-280	30'	LSCH801	
12	PIPE STRAP FOR 1" PVC CONDUIT 2 HOLE	17-283	7	LPVCSTRP	
13	NAIL, STAINLESS STEEL SCREW 2.5"	14-427	.25#	LNAL14*2	
14	POLE, 35' CLASS 4	09-035	1	L354UG	
15	1" PVC 90 DEGREE ELBOW	17-297	1	LE1901	
16	1" PVC CONDUIT	17-299	AS REQ'D	LPVC1	
17	1" PVC 45 DEGREE ELBOW	17-298	1	LE1451	
18	1" PVC COUPLING	17-296	1	LE1451	
19	STEEL POLE 31" STREET LIGHT	09-300	1	L31STLUG	LSTEELOG
20	ALUMINUM TRANSFORMER BASE	21-611	1	LTBASE	
21	BREAK-A-WAY FUSES, 30 AMP	21-250	2	LBRKFUSE	
22	5/8" GROUND ROD CLAMP	07-461	1		
23	5/8" x 10' CU BONDED GROUND ROD	08-626	1	LGRNDROD	

HACIENDAS DEL RIO UNIT ONE
BEING A PORTION OF TRACTS 3B AND 3D1 AND ALL OF TRACT 3C AND A 30 FOOT COUNTY ROW, BLOCK 16 UPPER VALLEY SURVEYS EL PASO COUNTY, TEXAS CONTAINING 33.5014 ACRES

6/13/10
All
6/13/10

ILLUMINATION AND TRAFFIC CONTROL PLAN
SHEET: C-24
PAGE: 24
OF: 24



GENERAL NOTES:

1. DEVELOPER SHALL OBTAIN SOIL SAMPLES (TAKEN FROM PROPOSED PARK SITE FINISHED GRADE) AND PROVIDE COMPLETE ANALYSIS REPORT (TEXTURAL, MINERALS AVAILABILITY, WATER PECOCLON, DETAILED SALINITY & PH TEST WITH RECOMMENDATIONS FOR SOILS AMENDMENTS) TO INSURE EXISTING SOIL CONDITIONS ARE SUITABLE FOR TURF, SHRUBS AND TREES GROWTH. COORDINATE SITE VISIT WITH LANDSCAPE ARCHITECT FOR COLLECTION OF SOIL SAMPLES (TO BE A DEPTH OF 12").
2. ANY UNSUITABLE SOIL CONDITIONS SHALL BE REMEDIATED BY REMOVAL OF SOILS, SOILS TO BE REPLACED WITH TOPSOILS, CLAY SOILS AND CONTAMINATED SOILS TO A MINIMUM DEPTH OF 12 INCHES AS REQUIRED FOR PROPER PLANTING AS PER PARKS DESIGN GUIDELINES AND CONSTRUCTION STANDARDS.
3. ANY UNSUITABLE SOIL MATERIALS NOT APPROVED BY LANDSCAPE ARCHITECT ARE TO BE REMOVED, DISPOSED OFF SITE (APPROVED SITE) AND REPLACED WITH TOPSOIL TO THE REMOVAL DEPTH AS NEEDED.
4. CONTRACTOR SHALL BE REQUIRED TO OBTAIN PROPER PERMITS BUILDING, ELECTRICAL, LANDSCAPE & IRRIGATION, ETC.
5. DEVELOPER SHOULD PROVIDE TDLR REGISTRATION NUMBER TO LANDSCAPE ARCHITECT, CITY OF EL PASO AND PARKS DEPARTMENT, TO INCLUDE PLAN REVIEW AND INSPECTION FOR SUBSTANTIAL COMPLETION.
6. PROVIDE MINIMUM 3 PERCOLATION TEST BY THE DEVELOPER FOR THE "PARK SITE" PRIOR TO COMMENCEMENT OF ANY WORK WITHIN "PARK SITE."

NOTES FOR PLANTING:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PREVENT PLANTS FROM FALLING OR BEING BLOWN OVER AND TO STRAIGHTEN OR REPAIR ALL PLANTS WHICH ARE DAMAGED DUE TO WIND, PLANTS BLOWN OVER BY HIGH WINDS SHALL NOT BE A CAUSE FOR ADDITIONAL EXPENSE TO THE OWNER, BUT SHALL BE THE FINANCIAL RESPONSIBILITY OF CONTRACTOR.
2. TOPSOIL MATERIAL FOR PLANTING SHALL BE FREE FROM HARD CLODS, STIFF CLAY, HARD PAN, STONES LARGER THAN 1" IN DIAMETER, NOXIOUS WEEDS AND PLANTS, SOD, PARTIALLY DISINTEGRATED DEBRIS, INSECTS OR ANY OTHER UNDESIRABLE MATERIAL. PLANTS OR SEEDS THAT WOULD BE TOXIC OR HARMFUL TO GROWTH.
3. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF PLANT MATERIAL QUANTITIES.
4. IN THE EVENT OF VARIATION BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THE PLANS, THE PLANS SHALL CONTROL. IMPROPER PLANT COUNT MADE BY THE LANDSCAPE CONTRACTOR SHALL BE NO CAUSE FOR ADDITIONAL COSTS TO THE OWNER.
5. THE CONTRACTOR SHALL MEET BOTH THE CONTAINER SIZE AND CALIPER SIZE, AS WELL AS HEIGHT AND SPREAD SPECIFICATIONS SPECIFIED.
6. EXCAVATE TWO TIMES GREATER THAN THE ROOT BALL DIAMETER OF THE SHRUB, TWO TIMES GREATER THAN THE ROOT BALL FOR TREES. PLACEMENT OF PLANT SHALL BE PERPENDICULAR TO GROUND.
7. CONTRACTOR WILL NOT PLANT MATERIAL SHOWN ON PLANS WHEN IT IS EVIDENT THAT FIELD CONDITIONS HAVE CHANGED SINCE PLANS WERE DRAWN. ANY CHANGES ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT BEFORE ANY PLANTING IS DONE IN THE AREA.
8. PLANT SUBSTITUTIONS WILL BE PERMITTED, REJECT SUBSTITUTION IN WRITING GIVING REASONS FOR SUCH SUBSTITUTIONS.
9. TURF QUANTITY TAKE OFF ARE THE RESPONSIBILITY OF THE CONTRACTOR.
10. TREAT ALL PLANTING AREAS WITH AN APPLICATION OF SUBSIF. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR APPLICATION.
11. REMOVE ALL WIRE, STRINGS, WIRE BASKETS, BURLAP, CONTAINERS, ETC., FROM THE ROOTBALL OF PLANTS BEFORE BACKFILLING THE PLANTING HOLE.
12. SEEDDED AREAS SHOULD BE MAINTAINED UNTIL A FULL GROWTH OF WILD GRASS OR SEEDDED MATERIAL IS ACHIEVED.
13. WARRANTY FOR THE PLANTING MATERIAL SHALL BE ONE YEAR FROM THE DATE OF ACCEPTANCE. (TREES, SHRUBS AND GROUNDCOVER)

MATERIAL LEGEND:

- TURF TYPE SHALL BE RECREATION HYBRID (1.5" MINIMUM) 75,000 SQ. FT.
- ROCK MULCH SHALL BE 3/4" TRAIL MIX 3" DEPTH PLACED ON GEOTEX FABRIC, CONTECH MARFIA 1600. PLACE OVER LIGHTLY COMPACTED SOIL. OVERLAP GEOTEX FABRIC MINIMUM OF 12" AND PIN WITH U-SHAPE METAL PIN 3" LENGTH ON 12" CENTER. SEE DETAIL L-8.
- CONCRETE PAVEMENT BY DEVELOPER
- ENGINEERED WOOD CHIPS, 12" COMPACTED DEPTH PLACED ON SUBGRADE COMPACTED AS PER SUPPLIER'S TESTING LAB RECOMMENDATIONS WHICH SHALL COMPLY WITH THE MOST CURRENT STANDARD IN ACCESSIBILITY (ADA) TO 95% COVER. SUBGRADE WITH GEOTEX FABRIC BEFORE PLACING ENGINEERED MATERIAL. TEST RESULTS TO PROVIDE A HIG TEST RESULT OF LESS THAN 5/10 AND A G-MAX OF LESS THAN 104.

TREE SCHEDULE

CODE	QTY	COMMON NAME / BOTANICAL NAME	SIZE	HEIGHT
FA	5	Fan-Tex Ash / Fraxinus velutina 'Fan-Tex'	3" CALIPER, SINGLE TRUNK	10'-12" MINIMUM
CM	3	Crape Myrtle / Lagerstroemia indica 'Red'	2" CALIPER, MULTI TRUNK	10'-12" MINIMUM
PE	6	Alfalfa Pine / Pinus eiderica	2" CALIPER, SINGLE TRUNK	10'-12" MINIMUM
PM	6	Honey Mesquite / Prosopis glandulosa 'Maverick' TM	2" CALIPER, SINGLE TRUNK	10'-12" MINIMUM
QF	5	Texas Live Oak / Quercus fusiformis	3" CALIPER, SINGLE TRUNK	10'-12" MINIMUM
BP	9	Bradford Pear / Pyrus Calleryana 'Bradford'	4" CALIPER, SINGLE TRUNK	10'-12" MINIMUM
RP	4	Pink Flowering Locust / Robinia x ambigua 'Purple Robe'	3" CALIPER, SINGLE TRUNK	10'-12" MINIMUM
UP	5	Lacebark / Ulmus parvifolia 'Lacebark'	3" CALIPER, SINGLE TRUNK	10'-12" MINIMUM
VC	2	Chaste Tree / Vitex agnus-castus	2" CALIPER, MULTI TRUNK	10'-12" MINIMUM
TOTAL	45			

NOTE: TREE SIZE SHALL COMPLY WITH NATIONAL NURSERY STANDARDS FOR CALIPER, HEIGHT AND SPREAD, BASED ON SIZE SPECIFIED.

PARKS DEPARTMENT

APPROVED BY *Charles E. ... 5/21/15*

DRAWING COORDINATION

LANDSCAPE ARCHITECTURAL, IRRIGATION, CIVIL, AND ELECTRICAL DRAWINGS ARE INTERRELATED. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL REVIEW AND COORDINATE THE ENTIRE SET OF DRAWINGS AND PROJECT MANUAL.

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LANDSCAPE PLAN
SCALE: 1" = 30'-0"
NORTH

SODDING NOTES

- SUBMIT THE FOLLOWING:
1. SOD CERTIFICATION FOR GRASS SPECIES AND NAME AND LOCATION OF SOD SOURCE. SODDING SCHEDULE, INCLUDING DATES AND TYPE OF WORK TO BE PERFORMED. PRIOR TO ORDERING, NAME OF SUPPLIER OF SOIL AMENDMENTS MATERIALS. QUALITY ASSURANCE
 2. MINIMUM AGE 18 MONTHS, WITH ROOT DEVELOPMENT THAT WILL SUPPORT ITS OWN WEIGHT WITHOUT TEARING, WHEN SUSPENDED VERTICALLY BY HOLDING THE UPPER TWO CORNERS. DELIVERY, STORAGE AND HANDLING
 3. TIME DELIVERY SO THAT SOD WILL BE PLACED WITHIN 24 HOURS OF DELIVERY AT SITE. PROTECT AGAINST DRYING AND BREAKING OF ROLLED STRIPS.
 4. DELIVER PACKAGED MATERIALS IN CONTAINERS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. PROTECT MATERIALS FROM DETERIORATION DURING DELIVERY AND WHILE STORED ON SITE.
- SITE CONDITIONS
5. PROCEED WITH AND COMPLETE LANDSCAPE WORK AS RAPIDLY AS PORTIONS OF SITE BECOME AVAILABLE, WORKING WITHIN SEASONAL LIMITATIONS FOR EACH KIND OF LANDSCAPE WORK REQUIRED.
 6. WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS CONSULT THE LANDSCAPE DESIGNER AND CITY OF EL PASO PARKS AND RECREATION BEFORE PLANTING.
 7. PLANT OR INSTALL MATERIALS DURING NORMAL PLANTING SEASONS FOR EACH TYPE OF LANDSCAPE WORK REQUIRED. CORRELATE PLANTING WITH SPECIFIED MAINTENANCE PERIODS TO PROVIDE MAINTENANCE FROM DATE OF FINAL ACCEPTANCE.
- SOIL AMENDMENTS
8. PROVIDE SOIL ANALYSIS BEFORE ADDITION OF SOIL AMENDMENTS & ANALYSIS OF SOIL AMENDMENTS. ORGANIC AMENDMENTS SHALL CONSIST OF WELL-AGED ORGANIC COMPOST OR APPROVED EQUAL FERTILIZER
 9. SLOW-RELEASE STARTER FERTILIZER ANALYSIS AS RECOMMENDED BY LANDSCAPE ARCHITECT BY WEIGHT AT A RATE OF 1 LB OF ACTUAL NITROGEN PER 1,000 SQUARE FEET BY WEIGHT.
- GRASS MATERIALS
10. PROVIDE STRONGLY ROOTED SOD, NOT LESS THAN 18 MONTHS OLD AND FREE OF WEEDS AND UNDESIRABLE NATIVE GRASSES AND MACHINE CUT TO PAD THICKNESS TO BE 1" IN LIEU OF 3/4" (PLUS OR MINUS 1/4"), EXCLUDING TOP GROWTH AND THATCH. PROVIDE SOD CAPABLE OF GROWTH AND DEVELOPMENT WHEN PLANTED. CUT SOD PIECES A MINIMUM OF 18" WIDE.
- PREPARATION
11. PRIOR TO START OF SOIL PREPARATION ALL FINISH GRADES SHALL BE ESTABLISHED AND APPROVED AS MEETING THE REQUIREMENTS OF THE GRADING PLAN. APPLY A UNIFORM ONE-INCH LAYER (3 C.Y./1000 SQUARE FEET) OF ORGANIC SOIL AMENDMENT, AFTER APPLICATION OF ORGANIC AMENDMENT AND STARTER FERTILIZER ALL AREAS TO BE SODDED SHALL BE THOROUGHLY ROTOTILLED TO A MINIMUM DEPTH OF 12 INCHES. AFTER ROTOTILLING IS COMPLETE AT CROSS DIRECTIONS, DRAG, AND LASER LEVEL TO AN EVEN GRADE, THEN ROLL FOR FIRMNESS. RAKE TILLED AREA AND REMOVE ROLL ENTIRE AREA WITH WEIGHTED HAND ROLLER. STONES OVER 1 INCH IN ANY DIMENSION, STICKS, ROOTS, RUBBISH AND OTHER EXTRANEIOUS MATTER.
- SODDING OPERATIONS
12. LAY SOD WITHIN 24 HOURS OF DELIVERY AT SITE. DO NOT PLANT DORMANT SOD OR ON FROZEN GROUND.

NOTES:
CONTRACTOR SHOULD STAKE TREE LOCATIONS FOR APPROVAL OF THE LANDSCAPE ARCHITECT AND THE CITY OF EL PASO PARKS AND RECREATION DEPARTMENT BEFORE PLANTING OPERATIONS

REVISIONS: 1. DATE: 5/21/15 BY: PARKS DEPARTMENT

WARNING! BEFORE YOU DIG CONTRACTOR SHALL FIELD LOCATIONS EXISTING UNDERGROUND IMPROVEMENTS IN PROJECT AREA

SCALE: AS SHOWN

DATE: 5/21/15

DRAWN BY: M. ...

CHECKED BY: ...

APPROVED BY: ...

PROJECT NAME: RIO DEL NORTE PARK

6700 RIO HACIENDA CIRCUIT

EL PASO COUNTY, TEXAS

1007 B. BLOCK 5

HACIENDA DEL RIO UNIT 1

3.28 ACRES, TOTAL OF 99.513 ACRES

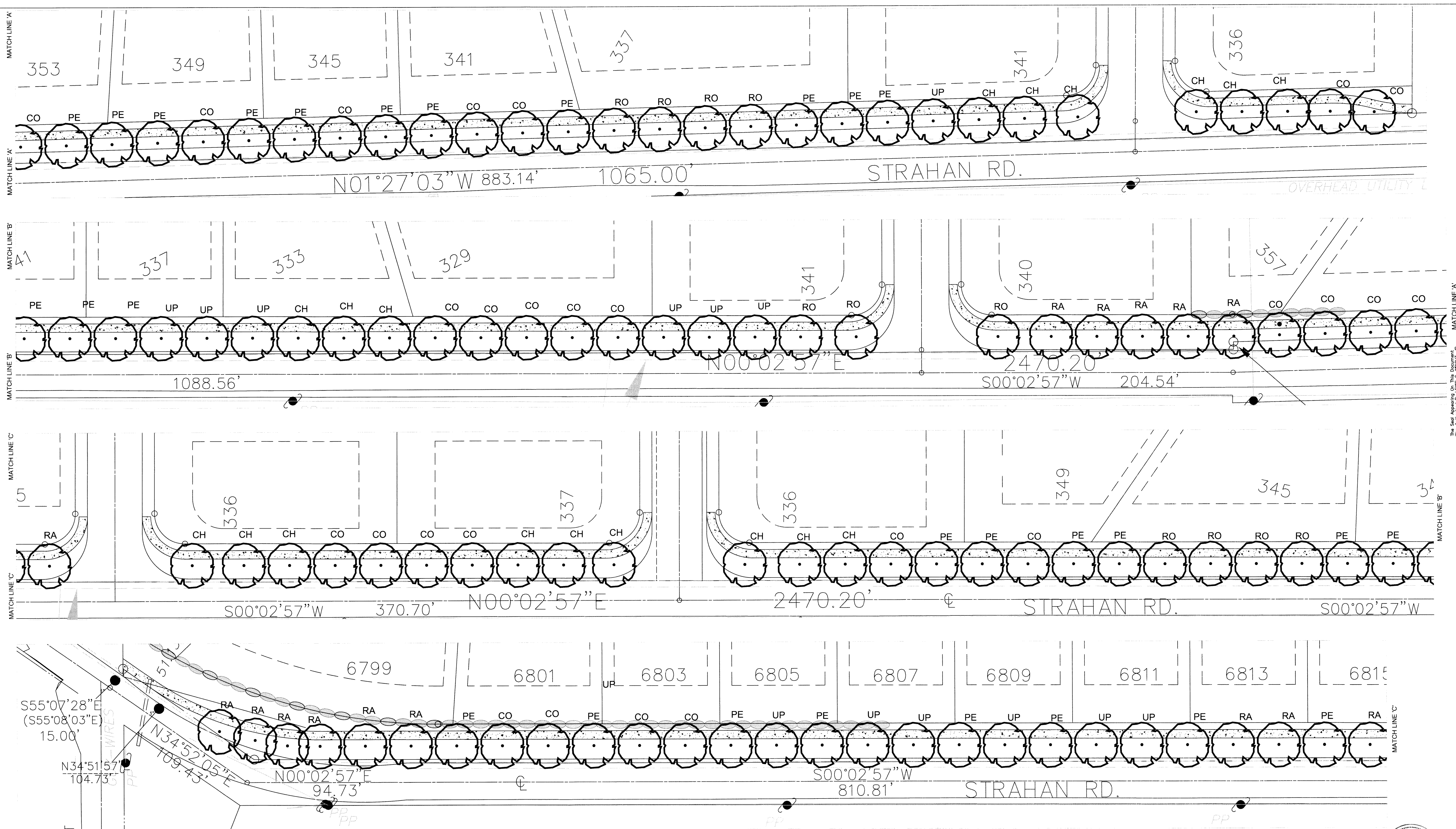
LANDSCAPE ARCHITECTURAL SERVICES

APPROVED BY: Charles E. ... 5/21/15

SHEET TITLE: PARK LANDSCAPE

L-1.0

SHEET OF



NOTES FOR PLANTING:

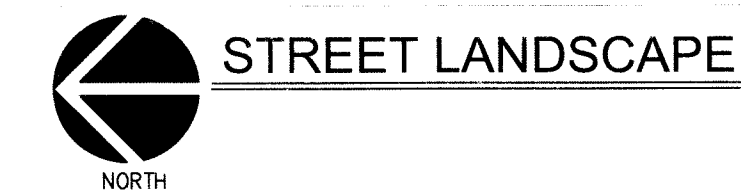
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PREVENT PLANTS FROM FALLING OR BEING BLOWN OVER AND TO STRAIGHTEN OR REPLANT ALL PLANTS WHICH ARE DAMAGED DUE TO WIND. PLANTS BLOWN OVER BY HIGH WINDS SHALL NOT BE A CAUSE FOR ADDITIONAL EXPENSE TO THE OWNER, BUT SHALL BE THE FINANCIAL RESPONSIBILITY OF CONTRACTOR.
- TOPSOIL MATERIAL FOR PLANTING SHALL BE FREE FROM HARD CLODS, STIFF CLAY, HARD PAN, STONES LARGER THAN 1" IN DIAMETER, NOXIOUS WEEDS AND PLANTS, SOD, PARTIALLY DISINTEGRATED DEBRIS, INSECTS OR ANY OTHER UNDESIRABLE MATERIAL. PLANTS OR SEEDS THAT WOULD BE TOXIC OR HARMFUL TO GROWTH.
- CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF PLANT MATERIAL QUANTITIES.
- IN THE EVENT OF VARIATION BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THE PLANS, THE PLANS SHALL CONTROL. IMPROPER PLANT COUNT MADE BY THE LANDSCAPE CONTRACTOR SHALL BE NO CAUSE FOR ADDITIONAL COSTS TO THE OWNER.
- THE CONTRACTOR SHALL MEET BOTH THE CONTAINER SIZE AND CALIPER SIZE, AS WELL AS HEIGHT AND SPREAD SPECIFICATIONS SPECIFIED.
- EXCAVATE TWO TIMES GREATER THAN THE ROOT BALL DIAMETER OF THE SHRUB, TWO TIMES GREATER THAN THE ROOT BALL FOR TREES. SCARIFY BOTTOM OF PLANTING PIT BEFORE PLACING PLANT. PLACEMENT OF PLANT SHALL BE PERPENDICULAR TO GROUND.
- CONTRACTOR WILL NOT PLANT MATERIAL SHOWN ON PLANS WHEN IT IS EVIDENT THAT FIELD CONDITIONS HAVE CHANGED SINCE PLANS WERE DRAWN. ANY CHANGES ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE DESIGNER BEFORE ANY PLANTING IS DONE IN THE AREA.
- PLANT SUBSTITUTIONS WILL BE PERMITTED, REQUEST SUBSTITUTION IN WRITING GIVING REASONS FOR SUCH SUBSTITUTIONS.
- TURF QUANTITY TAKE-OFF ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- TREAT ALL PLANTING AREAS WITH AN APPLICATION OF SURF.
- PLANT MANUFACTURER'S INSTRUCTIONS FOR APPLICATION.
- REMOVE ALL WIRE, STRING, WIRE BASKETS, BURLAP, CONTAINERS, ETC., FROM THE ROOTBALL OF PLANTS BEFORE BACKFILLING THE PLANTING HOLE.
- SEEDING AREAS SHOULD BE MAINTAINED UNTIL A FULL GROWTH OF WILD GRASS OR SEEDING MATERIAL IS ACHIEVED.
- WARRANTY FOR THE PLANTING MATERIAL SHALL BE ONE YEAR FROM THE DATE OF ACCEPTANCE. (TREES, SHRUBS AND GROUNDCOVER).

GENERAL NOTES:

- DEVELOPER SHALL OBTAIN SOIL SAMPLES (TAKEN FROM PROPOSED PARK SITE FINISHED GRADE) AND PROVIDE COMPLETE ANALYSIS REPORT (TEXTURAL, MINERALS AVAILABILITY, WATER PCELOCATION, DETAILED SALINITY & PH TEST WITH RECOMMENDATIONS FOR SOILS AMENDMENTS TO INSURE EXISTING SOIL CONDITIONS ARE SUITABLE FOR TURF, SHRUBS AND TREES GROWTH. COORDINATE SITE VISIT WITH LANDSCAPE ARCHITECT FOR COLLECTION OF SOIL SAMPLES (TO BE A DEPTH OF 12").
- ANY UNSUITABLE SOIL CONDITIONS SHALL BE REMEDIATED, BY REMOVAL OF SOILS, SOILS WITH STONES, HIGH CALICHE SOILS, CLAY SOILS AND CONTAMINATED SOILS TO A MINIMUM DEPTH OF 12 INCHES AS REQUIRED FOR PROPER PLANTING AS PER PARKS DESIGN GUIDELINES AND CONSTRUCTION STANDARDS.

MATERIAL LEGEND

ROCK MULCH SHALL BE PADRE CANYON SCREENING 2" DEPTH, PLACED ON GEOTEX FABRIC, MARIFI 160N PLACE OVER LIGHTLY COMPACTED SOIL. OVERLAP GEOTEX FABRIC MINIMUM OF 12" AND PIN WITH U-SHAPE METAL PIN 3" LENGTH ON 12" CENTER.



SCALE: 1" = 30'-0"



Final Approval

NOTES

- CONTRACTOR SHALL BE REQUIRED TO OBTAIN A PERMIT FROM BUILDING PERMITS AND INSPECTION FOR THE IRRIGATION SYSTEM.
- CONTRACTOR SHOULD STEAK TREE LOCATIONS FOR APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE PLANTING OPERATIONS.

DRAWING COORDINATION

LANDSCAPE ARCHITECTURAL, IRRIGATION, CIVIL, AND ELECTRICAL DRAWINGS ARE INTERRELATED. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL REVIEW AND COORDINATE THE ENTIRE SET OF DRAWINGS AND PROJECT MANUAL.

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TREE SCHEDULE

CODE	QTY	COMMON NAME/ BOTANICAL NAME	SIZE	HEIGHT
RA	15	RAYWOOD ASH / FRAXINUS ANGUSTIFOLIA (F.OXYCARPA)	3" CALIPER, SINGLE TRUNK	10'-12' MINIMUM
PE	28	AFGAN PINE / PINUS ELDERICA	3" CALIPER, SINGLE TRUNK	10'-12' MINIMUM
RO	11	TEXAS LIVE OAK / QUERCUS BUCKLEYI	3" CALIPER, SINGLE TRUNK	10'-12' MINIMUM
CO	26	CHICKINPIN / QUERCUS MUHIEMBERGII	3" CALIPER, SINGLE TRUNK	10'-12' MINIMUM
CH	18	CHINESE PISTACHE / PISTACIA CHINENSIS	3" CALIPER, SINGLE TRUNK	10'-12' MINIMUM
UP	13	LACEBARK / ULMUS PARVIFOLIA 'LACEBARK'	3" CALIPER, SINGLE TRUNK	8'-10' MINIMUM
TOTAL	111			

BY _____

NO. _____ DATE _____

REVISION REMARKS

WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL
FIELD LOCATE ALL EXISTING
UNDERGROUND IMPROVEMENTS
IN PROJECT AREA

SCALE: 1" = 30'-0"

HOR: N/A
VER: N/A

DATE: MAY 23, 2013
DESIGN BY: L. WRIGHT
DRAWN BY: J. BERNA
CHKD BY: L. WRIGHT
APPD BY: L. WRIGHT

PROJECT NAME

STRAHAN RD. STREETSCAPE

HACIENDA DEL RIO DEVELOPMENT
EL PASO, TEXAS

LANDSCAPE ARCHITECTURAL SERVICES

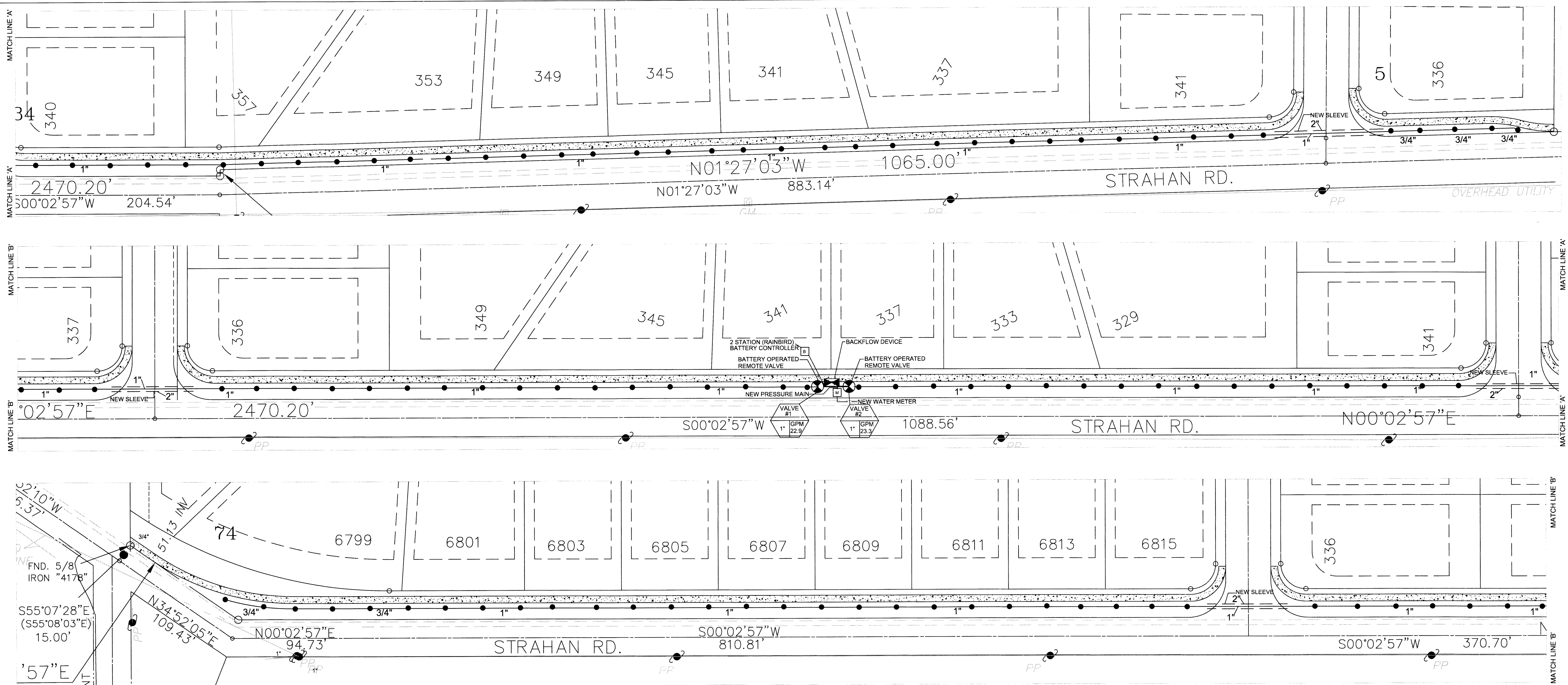
ARIZONA
LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT
2007 TEXAS AVENUE SUITE A EL PASO, TX 79960
PHONE: (979) 462-7776 EMAIL: lwright@laservices.com

SHEET TITLE

STREET LANDSCAPE

L-3.0

SHEET _____ OF _____



GENERAL NOTES FOR IRRIGATION:

- IRRIGATION PLAN IS DIAGRAMMATIC IN NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR ACCOMPLISHING FULL COVERAGE IN ALL AREAS WITH SPECIFIED EQUIPMENT. ANY DISCREPANCIES IN THE PLAN SHOULD BE BROUGHT TO THE PROJECT MANAGER'S ATTENTION DURING CONSTRUCTION.
- ALL FITTINGS AND NECESSARY EQUIPMENT REQUIRED TO MAKE THIS IRRIGATION SYSTEM OPERATE PROPERLY AND TO COMPLY WITH LOCAL AND STATE CODES ARE INCIDENTAL TO THESE PLANS AND ARE THE CONTRACTOR'S RESPONSIBILITY.
- CONTRACTOR WILL BE HELD LIABLE FOR GAINING ACCESS UNDER ALL PAVEMENTS.
- SLEEVES SHOWN ON THE PLANS SHOULD BE VERIFIED FOR ACCESSIBILITY AND FEASIBILITY BEFORE BID IS MADE.
- THE CONTRACTOR SHALL LOCATE AND VERIFY EACH WATER TAP TO WHICH THE IRRIGATION SYSTEM WILL CONNECT. ALL EQUIPMENT AND INSTALLATION METHODS SHALL COMPLY WITH THE STANDARDS OF THE CITY OF EL PASO AND THE SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR ALL CONNECTIONS AND VALVES REQUIRED FOR THE FULL IMPLEMENTATION OF THE SYSTEM.
- THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO INITIATING WORK.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE OR INTERRUPTION IN SERVICE CAUSED BY HIS EXCAVATIONS AND/OR WORK.
- EACH CONTROLLER WILL HAVE AN INDEPENDENT COMMON WIRE LOOPED TO THE VALVES CONNECTED TO IT.
- REMOTE CONTROL VALVE WIRES ARE TO BE IN A SEPARATE TRENCH 5' FROM MAIN LINE ON NORTH OR WEST SIDE OF MAINLINE.
- ALL REMOTE CONTROL VALVE WIRES NEED TO BE LABELED AT VALVE W/ WEATHER (WATER) PROOF LABELS AND AT CONTROLLER WITH CORRESPONDING LABEL. (LETTER AND/OR NUMBER TAGS IN SEQUENTIAL ORDER WILL BE PROVIDED).
- SPLICING OF REMOTE CONTROL VALVE WIRES IS NOT ALLOWED BETWEEN CONTROLLER & VALVE BOX FOR WIRES MUST BE CONTINUOUS FROM CONTROLLER TO REMOTE CONTROL VALVE WITHOUT SPLICING.
- ALL SPRINKLER HEADS SHALL BE ON STAINLESS STEEL RISERS WITH CHECK VALVE.
- CONTRACTOR SHALL PROVIDE SLEEVES FOR NEW IRRIGATION LINES CROSSING UNDER CONCRETE SIDEWALKS. SLEEVES SHALL BE 2 TIMES THE PIPE SIZE EXTENDED 24" BEYOND EDGE OF SURFACE, BE WRAPPED WITH MINIMUM 4 MIL PLASTIC AND TAPED WITH 3M BRAND HEAVY DUTY PLASTIC.

NOTES FOR IRRIGATION:

- Irrigation pipes, valves, and irrigation equipment may be shown paving or outside of property boundaries for clarity only. Install all pvc pipe min. 1' (foot) behind back of curb.
 - Contractor shall contact all utility companies before any trenching operation, to locate and mark their lines in the areas of work.
 - All valves and regulators shall be installed in plastic valve boxes with locking covers. Valve box(es) shall be manufactured by Carson Industries, model series 1419 box with bolt down cover. Drip emitter box shall be Carson model 809.
 - Actual conditions in the field may necessitate adding, or adjusting heads to insure uniform coverage and distribution, contractor shall be responsible for field changes with the Landscape Architect.
 - Contractor will not willfully install the irrigation system as designed, when it is obvious that field conditions exist, that were not considered at time of designing the system. Any conditions noted as such, shall be reported to the Landscape Architect. If the contractor fails to do so, the Contractor assumes full responsibility for any corrections needed.
 - All valves shall be tagged with a waterproof tag at each valve showing valve number and controller number as shown on plans. Label all wiring at Controllers and panels.
 - Contractor shall stake out in the field all head and piping locations, first, for approval by the Landscape Architect before trenching and installation of equipment.
 - All access boxes and valve boxes along walkways within interior grounds of the site(s) shall be installed min. 24" from edge of all walkways to the back of the sprinkler head or valve boxes.
- NOTE:**
- CONTRACTOR SHALL BE REQUIRED TO OBTAIN A PERMIT FROM BUILDING PERMITS AND INSPECTIONS FOR THE IRRIGATION SYSTEM.
 - CONTRACTOR TO STAKE OUT SPRINKLER HEADS LOCATIONS FOR APPROVAL BY THE LANDSCAPE ARCHITECT BEFORE TRENCHING OPERATION ARE PERMITTED.
- DRAWING COORDINATION**
- LANDSCAPE ARCHITECTURAL, IRRIGATION, CIVIL, AND ELECTRICAL DRAWINGS ARE INTERRELATED. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL REVIEW AND COORDINATE THE ENTIRE SET OF DRAWINGS AND PROJECT MANUAL.

IRRIGATION IS REGULATED BY:
 TCEQ
 PO BOX 13087
 AUSTIN, TEXAS 78711-3087
 512 239-6719
 CHAPTER 34, TEXAS WATER CODE
 IRRIGATOR'S LIC. # 829



STREET IRRIGATION

SCALE: 1" = 40'-0"

MATERIAL LEGEND:

- NEW PRESSURE MAIN PVC CLASS 200, DEPTH 18". TO TOP OF PIPE
- NEW LATERAL PVC CLASS 200, DEPTH 12", TO TOP OF PIPE
- NEW SLEEVE: PVC CLASS 200, DEPTH 18". TO TOP OF PIPE
- DRIP EMITTER: HUNTER MODEL DRIPLINE TUBING MODEL PLD-06-12 EMITTER SPACING TO BE 12" O.C. EACH EMITTER 0.6 GPH FITTINGS, AND AIR RELIEF VALVE TO BE HUNTER. FLUSH VALVE TO BE NEATAFIM. SEE DETAIL L-5.0
- BATTERY OPERATED ELECTRIC REMOTE VALVE: WEATHER-MATIC MODEL 8200 CR SERIES. SIZE NOTED ON PLAN, PLACE IN VALVE BOX BRONZE CONSTRUCTION.
- BACKFLOW DEVICE: FEBCO MODEL 860 PLACE INSIDE OF A METAL ENCLOSURE MANUFACTURED BY HYDROCOWEL. SEE DETAIL SHEET L-5. SIZE 3" BCKFLOW DEVICE WITH SUPPORTS
- NEW WATER METER TO BE APPLIED FOR AND PAID BY DEVELOPER. INSTALLED BY WATER UTILITIES. SIZE 3/4" AND MAX CAPACITY 24 GPM
- BATTERY POWER CONTROLLER: RAINBIRD MODEL # TBOS2CM2. 2 STATION CONTROL MODULE. MOUNT IN ONE OF SIZED VALVE BOXES. USE PROPER WIRE CONNECTIONS.

NOTE: CONTRACTOR TO PROVIDE FIELD TRANSMITTER. MODEL # TBOS2FTUS.
 NOTE: 55 PSI STATIC, DESIGN PRESSURE. 30 PSI @ EMITTER MANIFOLD.



STRAHAN RD. STREETSCAPE

HACIENDA DEL RIO DEVELOPMENT
 EL PASO, TEXAS



SHEET TITLE
 IRRIGATION
 STREETSCAPE
 PLAN
L-4.0
 SHEET
 OF

NO.	DATE	REVISION REMARKS	BY

WARNING!
 BEFORE YOU DIG
 CONTRACTOR SHALL
 FIELD LOCATE ALL EXISTING
 UNDERGROUND IMPROVEMENTS
 IN PROJECT AREA

SCALE: 1" = 20'

HOR: N/A
 VER: N/A

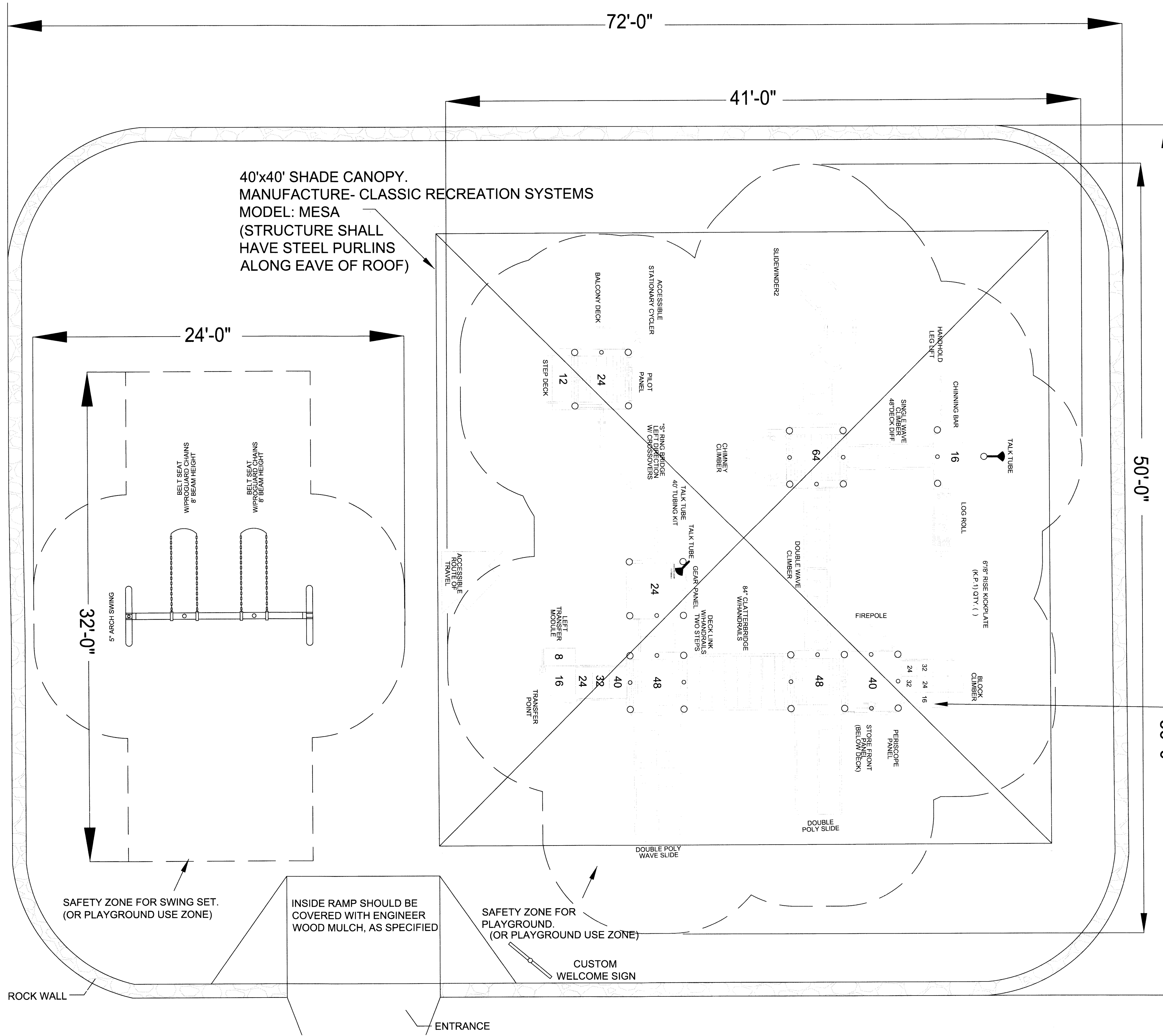
DATE: MAY 23, 2013
 DESIGN BY: LWRIGHT
 DRAWN BY: LCBENA
 CHKD BY: LCBENA
 APPD. BY: LWRIGHT

The Seal Appearing on This Document
 Was Authorized by License No. 0000000000
 Registration No. 829 on 03/03/2013

SHADE STRUCTURE DIMENSIONS AND NOTES.

ROOF DIMENSIONS	40'-0" x 40'-0"
COLUMN DIMENSIONS	35'-1/4" x 35'-1/4"
MINIMUM CLEARANCE	10'-0"
ROOF HEIGHT @ PEAK	18'-11 1/2"
HIP ROOF	4:12 PITCH

- NOTE: 1. CLEARANCE OF 10'-0" MINIMUM OF HIGHEST DECK.
 2. EAVE BEAM MUST BE ALONG OUTER EDGE OF METAL DECKING.



PLAYGROUND & SWING EQUIPMENT NOTES

- EQUIPMENT AND COMPONENTS TO BE IPEMA CERTIFIED.
- EQUIPMENT MANUFACTURER TO COMPLY WITH ISO 9001.
- EQUIPMENT MANUFACTURER TO PROVIDE CLEAR INSTALLATION MANUAL AND PROJECT LAYOUT AT THE COMPLETION OF PROJECT HARD COPY.
- EQUIPMENT AND FALL SURFACING MUST COMPLY WITH CURRENT STANDARDS AND GUIDELINES.
- EQUIPMENT TO CALLED OUT WITH LENGTHS FOR OVERHEAD ACTIVITIES, SPACING BETWEEN RAILS FOR CURLY CLIMBERS, TRACK RIDES, ETC.
- EQUIPMENT TO HAVE SAFETY TOP RAIL WITH A MINIMUM OF 72 INCHES AT CLIMBING OR SLIDING ELEMENTS.
- EQUIPMENT MANUFACTURER SALES REPRESENTATIVE TO BE NPSI CERTIFIED.
- EQUIPMENT INSTALLATION TO BE INSPECTED AND CERTIFIED FOR PROPER ASSEMBLY BY MANUFACTURER REPRESENTATIVE NPSI CERTIFIED.
- EQUIPMENT MUST BE SUPERSEDED BY SUBMITTAL PACKETS THAT HAVE THE FOLLOWING INFORMATION FOR REVIEW AND RELEASE BY PROJECT DESIGNER AND PARK AND RECREATION STAFF:
 - PROJECT SITE PLAN REFLECTING CONSTRUCTION DRAWINGS OR ACTUAL FIELD CONDITIONS.
 - SITE PLAN WITH CONSTRUCTION POINTS.
 - SITE PLAN WITH DIMENSIONS FOR ALL USE ZONES AND BETWEEN INDEPENDENT PIECES OF EQUIPMENT.
 - LOCATION OF CONTAINMENT WALL OR CURB.
 - LOCATION, LIMITS AND DIMENSIONS OF ACCESSIBLE PATH OF TRAVEL
 - LOCATION OF ANY SHADE CANOPIES AS APPLICABLE.
 - EQUIPMENT COLOR SELECTION CHART.
 - EQUIPMENT INFORMATION INCLUDING INSTALLATION.
- MANUFACTURER TO PROVIDE A SEALED MAINTENANCE KIT TO INCLUDE: TOOL BOX, SAND PAPER, OWNER'S MANUAL, HARDWARE (20 PIECES EACH MINIMUM) ASSORTED SIZES OF VANDAL PROOF NUTS, BOLTS, WASHERS, FASTENING TOOLS (ONE EACH SIZE - WRENCH AND CHUCK KEYS), 4CANS OF PRIMER, 2 CANS OF EACH COLOR OF TOUCH-UP PAINT, PLASTIC REPAIR KIT, ANTI-GRAFFITI REMOVER.
- EQUIPMENT INSTALLATION TO BE PERFORMED BY CONTRACTOR MEETING THE FOLLOWING REQUIREMENTS (a. AND b. ARE INSTALLATION EXPERIENCE REQUIREMENTS THAT MUST BE MET, c. AND d. ARE OPTIONAL REQUIREMENTS THAT MAY BE SUBSTITUTED FOR EITHER a. OR b.).
 - MINIMUM 8 YEARS EXPERIENCE INSTALLING SAME EQUIPMENT.
 - COMPLETE GOOD QUALITY INSTALLATION OF A MINIMUM OF 20 STRUCTURES OF SAME OR SIMILAR SIZE
 - TRAINING AND CERTIFICATION BY EQUIPMENT MANUFACTURER.
 - NPSI CERTIFICATION.
- EQUIPMENT AND FALL SURFACES TO BE AUDITED AND TESTED BY AN INDEPENDENT EQUIPMENT INVENTORY, PAID FOR BY THE DEVELOPER. AND PLAN VIEW WITH DIMENSIONS OF PLAYGROUND IMPROVEMENTS, EQUIPMENT MANUFACTURER, AND FALL SURFACES MANUFACTURER WITH TOLL FREE NUMBERS. ANY ITEMS FOUND DEFICIENT IN AUDIT MUST BE CORRECTED AND A RE-AUDIT OF CORRECTED ITEM TO INSURE THAT ALL DEFICIENT ITEMS ARE ADDRESSED.
- PLAYGROUND AREA TO BE FENCED AND PROPERLY SECURED THROUGHOUT, COURSE OF CONSTRUCTION AND UP TO ACCEPTANCE PROJECT.
- EQUIPMENT TO HAVE MINIMUM 72" SAFETY USE (FALL) ZONE ASTM1487-11.
- CONSTRUCTION WORK ON PLAYGROUND AREA WILL NOT COMMENCE UNTIL ALL MATERIALS AND SUPPLIES ARE IN POSSESSION OF CONTRACTORS.
- CONTRACTOR WILL INSURE THAT WORK PROGRESS WILL BE ONGOING AND JOB SITE WILL NOT BE LEFT ABANDONED FOR ANY TIME PERIOD GREATER THAN 48 HOURS.
- CONTRACTOR WILL INSURE THAT JOB SITE IS KEPT CLEAN AND CLEAR OF ANY CONSTRUCTION DEBRIS ON A DAILY BASIS.
- CUSTOM SIGN TO BE FURNISHED BY PLAYGROUND MANUFACTURER WITH INFORMATION ON AGE APPROPRIATE USE, ADULT SUPERVISION RECOMMENDED, MANUFACTURER'S NAME AND 1-800 PHONE NUMBER, CITY OF EL PASO MAINTENANCE PHONE NUMBER OF (915) 621-6791 AND "WARNING" INSTALLATION OVER HARD SURFACE NOTICE. THE SPECIFIC VERBIAGE CAN BE WORKED OUT DURING PROJECT CONSTRUCTION.
- PLAYGROUND EQUIPMENT BY LANDSCAPE STRUCTURES, MODEL.CUSTOM

NOTE: CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR AND OBTAIN BUILDING PERMIT AND FOR P.A.R.D. STAFF REVIEW PRIOR TO ORDERING OF STRUCTURE.

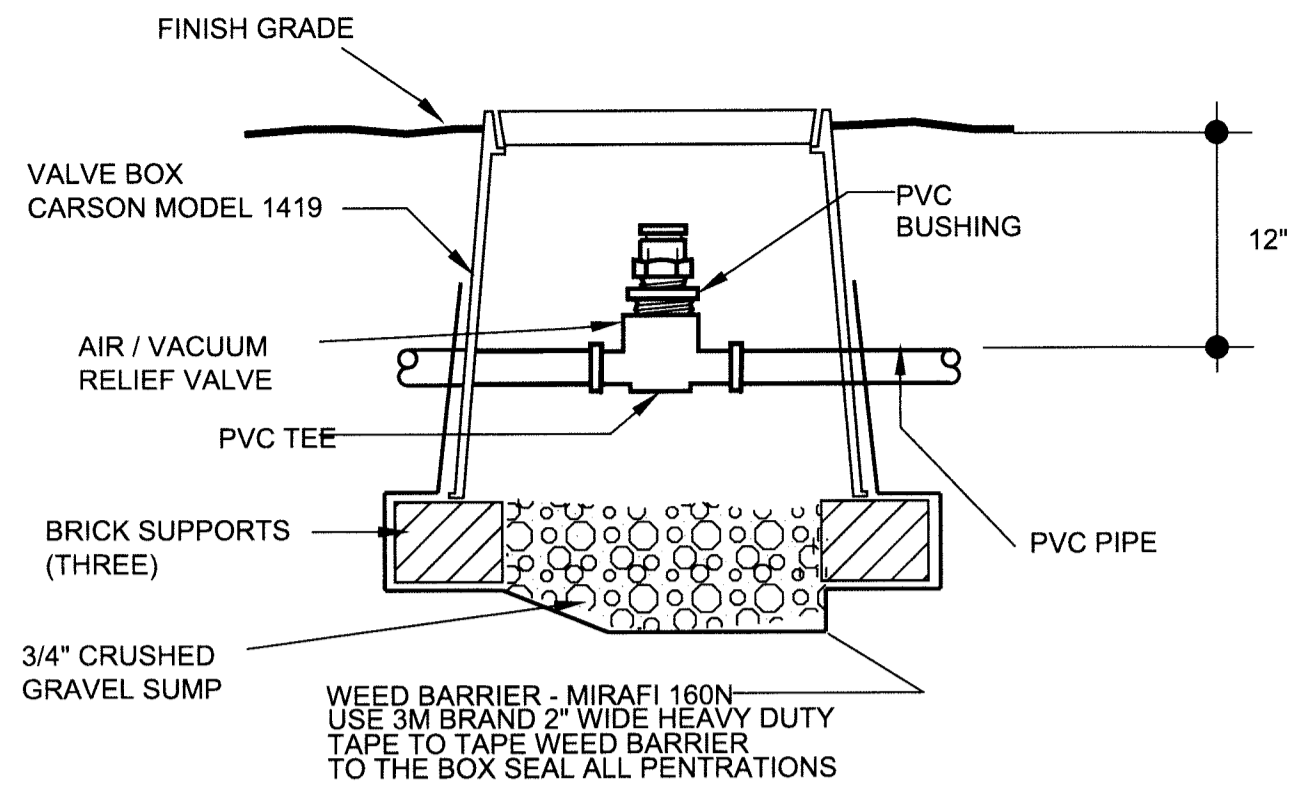
PLAYGROUND MODEL # 140146A BY LANDSCAPE STRUCTURES INC.
 40'x40' SHADE CANOPY, STRUCTURE COLUMNS SHALL BE LOCATED OUT OF THE USE ZONE AS SHOWN ON PLAN.

- NOTES:
- PLAYGROUND AREA FALL SURFACING MATERIAL MUST BE ENGINEERING WOOD FIBER FROM PRE-CONSUMED WOOD AND INSTALLED IN ACCORDANCE WITH INDEPENDENT LABORATORY TESTING PROCEDURES, PROVIDE REPORT.
 - WOOD MULCH TO BE COMPACTED PER LAB'S RECOMMENDATIONS (PROCEDURE) TO COMPLY WITH ADA STANDARDS.
 - PLAYGROUND AREA FALL SURFACING MATERIAL- FALL HEIGHT TEST RESULTS REQUIREMENTS MUST COMPLY WITH A HIC MAXIMUM OF 570 AND A G-MAX MAXIMUM OF 104.

CUSTOM PLAYGROUND SIGN TO INCLUDE:
 1. WELCOME.
 MANUFACTURES PHONE NUMBER.
 MAINTENANCE PHONE NUMBER.
 2. AGES.
 3. WARNINGS.

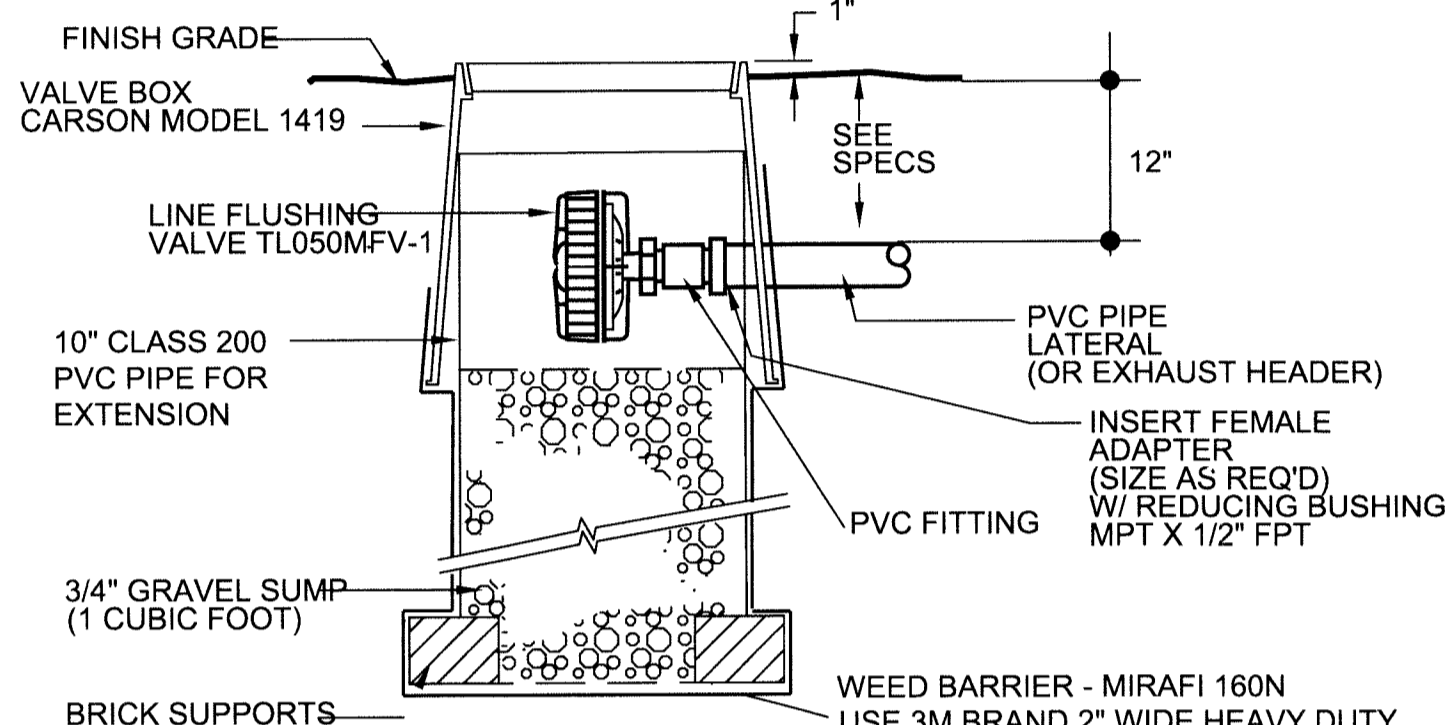


BY		REVISION REMARKS	
NO.	DATE		
<p>WARNING! BEFORE YOU DIG CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND IMPROVEMENTS IN PROJECT AREA</p>			
SCALE	HOR: NOT TO SCALE	VER: NOT TO SCALE	
	DATE: MAY 22, 2013	DESIGN BY: J. WRIGHT	
	DRAWN BY: J. WRIGHT	CHKD BY: L. WRIGHT	
		APPD BY: L. WRIGHT	
<p>PROJECT NAME: RIO DEL NORTE PARK 6700 RIO HACIENDA CIRCLE EL PASO COUNTY, TEXAS LOT 8, BLOCK 5 HACIENDA DEL RIO UNIT 1 2.28 ACRES, TOTAL OF 99,318 SQ.FT</p>			
<p>LANDSCAPE ARCHITECTURAL SERVICES ARIZONA NEW MEXICO TEXAS LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT 6700 RIO HACIENDA CIRCLE, SUITE 100 EL PASO, TEXAS 79907 PHONE: (915) 422-7138 EMAIL: jwright@landscape.com</p>			
<p>SHEET TITLE: PLAYGROUND DETAILS L-5.0</p>			
<p>LANDSCAPE ARCHITECTURAL, IRRIGATION, CIVIL, AND ELECTRICAL DRAWINGS ARE INTERRELATED. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL REVIEW AND COORDINATE THE ENTIRE SET OF DRAWINGS AND PROJECT MANUAL.</p>			



AIR VACUUM RELIEF VALVE

NO SCALE

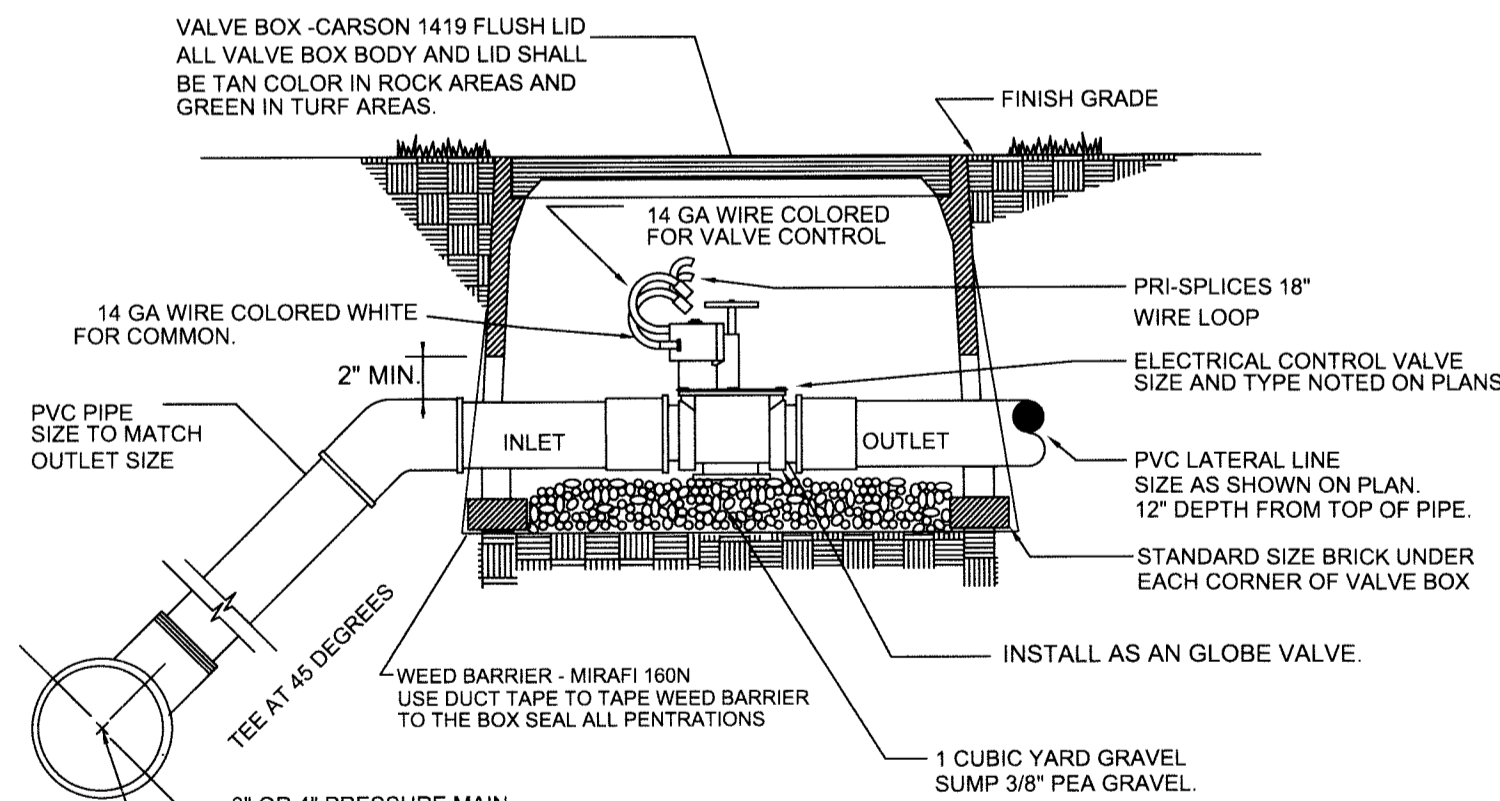


FLUSHING VALVE DETAIL

NO SCALE

GENERAL NOTES FOR VALVE AND ALL BOXES:

- 1) ONLY ONE COURSE OF BRICK AT EACH CORNER SHALL BE ALLOWED.
- 2) CONTRACTOR SHALL USE VALVE BOX EXTENSIONS ONLY TO REACH THE PROPER HEIGHT OF VALVE BOX TO FINISHED GRADE OF MULCH.
- 3) ALL VALVE AND EMITTER BOXES SHALL HAVE GEOTEX FABRIC INSTALLED UNDERNEATH AND TAPED TO SEAL ALL OPENINGS. TAPE SHALL BE 3M BRAND 2" WIDE HEAVY DUTY PLASTIC TAPE ONLY, NO DUCT TAPE SHALL BE ALLOWED.
- 4) ALL VALVE, EXTENSIONS AND EMITTER BOXES SHALL NOT REST OR CONTACT THE PVC PIPE OR DRIPLINE TUBING.



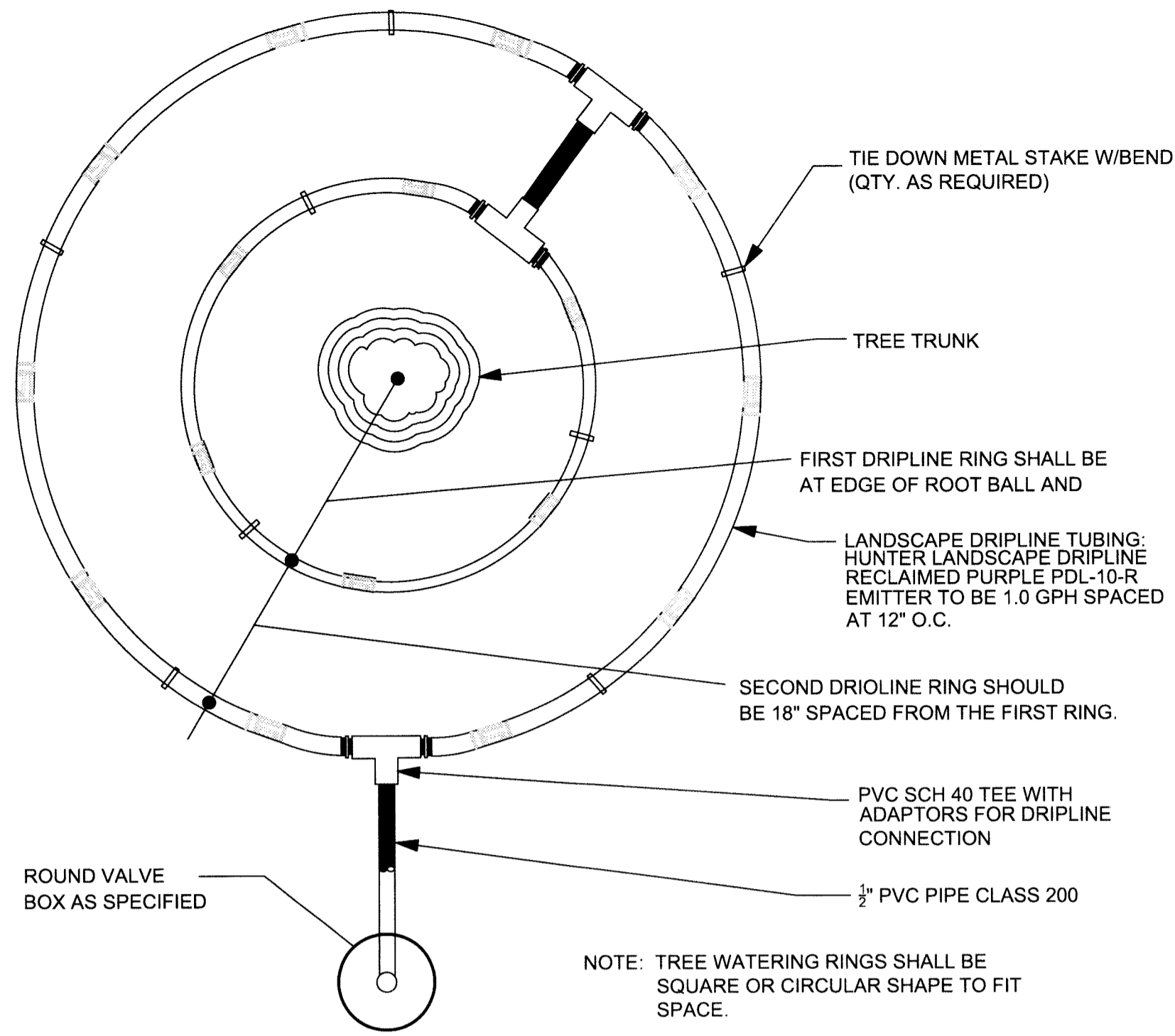
ELECTRICAL CONTROL VALVE DETAIL

NO SCALE

- NOTE:
- 1) ONLY ONE COURSE OF BRICK AT EACH CORNER SHALL BE ALLOWED.
 - 2) CONTRACTOR SHALL USE VALVE BOX EXTENSIONS ONLY TO REACH THE PROPER HEIGHT OF VALVE BOX TO FINISHED GRADE OF MULCH.

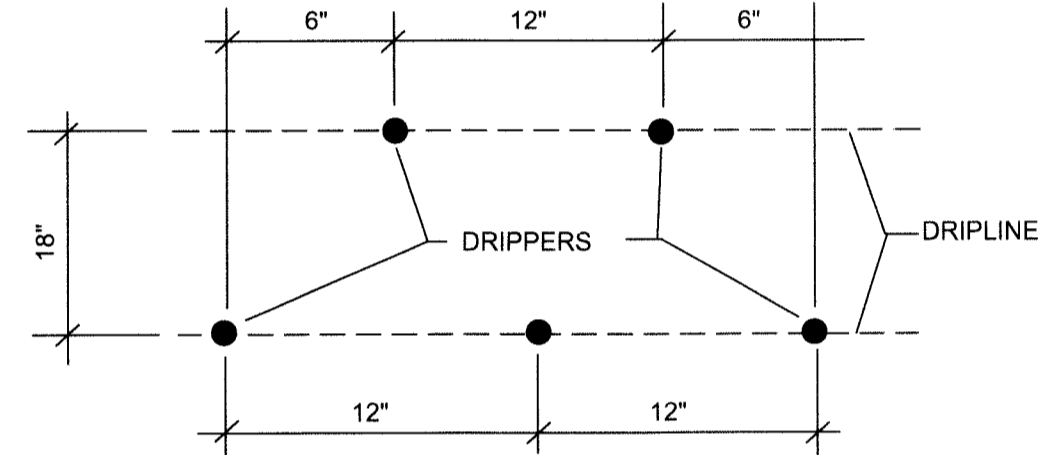
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SUB SURFACE DRIPLINE RINGS FOR TREES

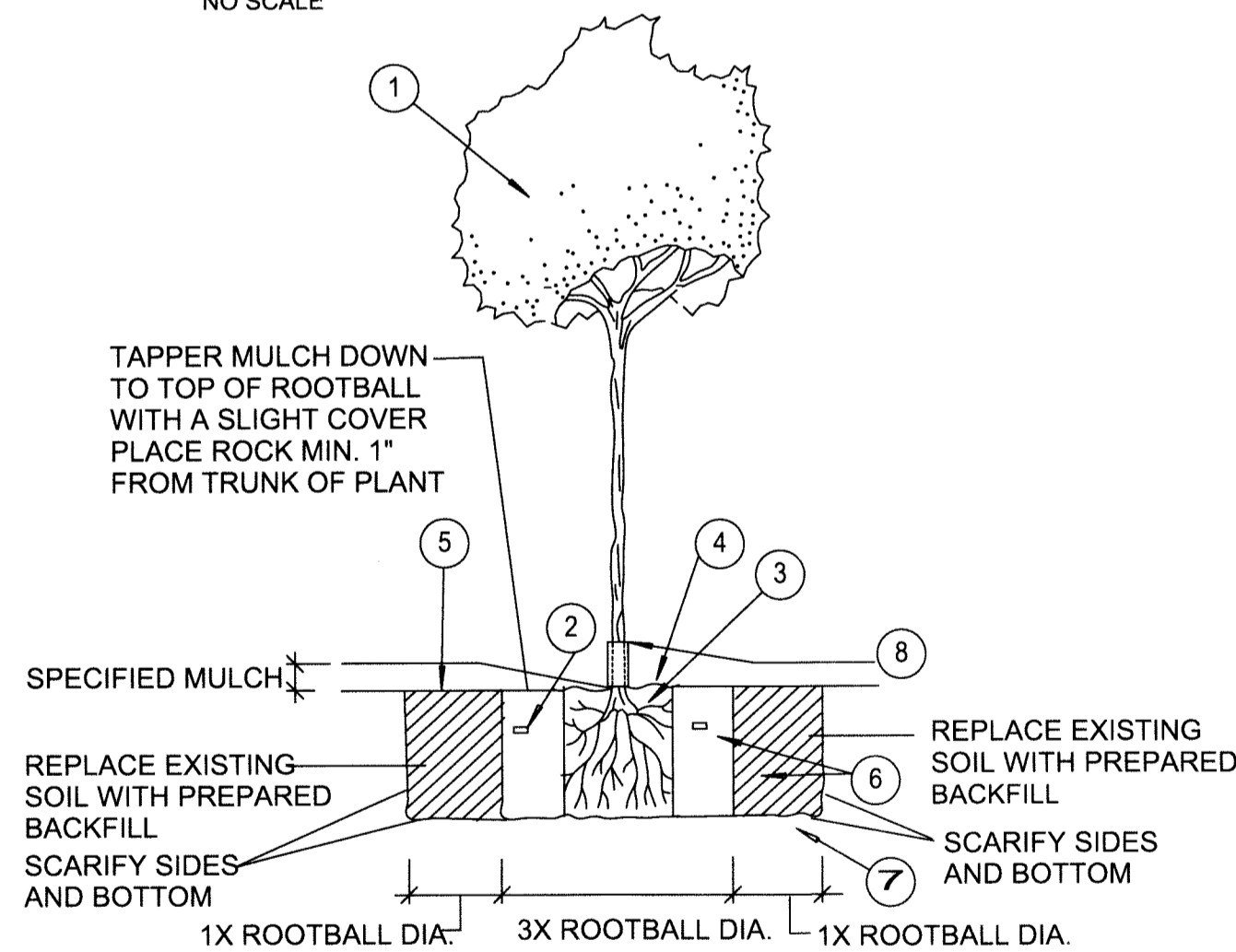
NO SCALE



- NOTES:
- 1) TYPICAL TRIANGULAR SPACING OF DRIPPERS THROUGHOUT THE ZONE.
 - 2) PLACE DRIPPERS FACING UP IN TRENCHES.

DRIPPER EMITTER PATTERN DETAIL

NO SCALE



LEGEND (FOR TREES)

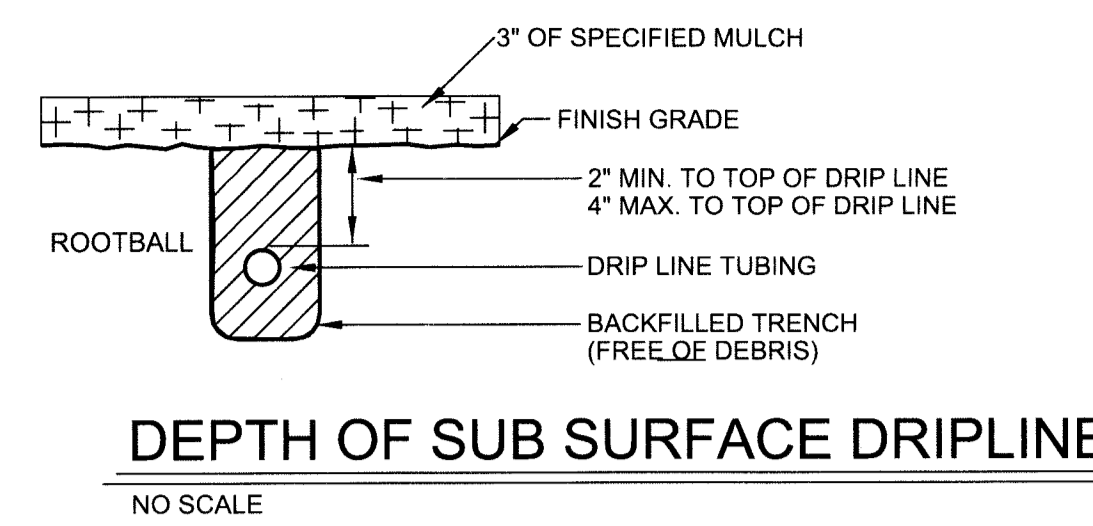
1. TREE PER PLAN
2. 21 GRAM PLANT TABLETS
5 GAL = 3, 15 GAL = 5, 24" BOX = 8
3. ROOTBALL (SET CROWN FLUSH WITH FINISH GRADE)
4. EARTH WATERING BASIN (COVER WITH 2" DEPTH OF SPECIFIED MULCH ON PLAN OR BARK MULCH FOR TURF AREAS).
5. FINISH GRADE
6. COMPACTED BACKFILL MIX WITH SOIL AMENDMENTS AS PER PLANTING SPECIFICATIONS AND NOTES)
7. UNDISTURBED NATIVE SOIL
8. PROVIDE TREE GUARD ON TREES PLANTED ON TURF ONLY!

NOTE:

- 1) STAKING WILL ONLY BE REQUIRED IF STRAIGHTNESS OF THE TREES CANNOT BE MAINTAINED WITHOUT ASSISTANCE.
- 2) LANDSCAPE ARCHITECT AND HIS EMPLOYEES SHALL NOT BE LIABLE FOR INJURIES TO USERS RESULTING FROM STAKING OF TREES TO MAINTAIN STRAIGHTNESS, DUE TO IMPROPER PLANTING AND IMPROPER ROOT BALL SIZE FOR HEIGHT.

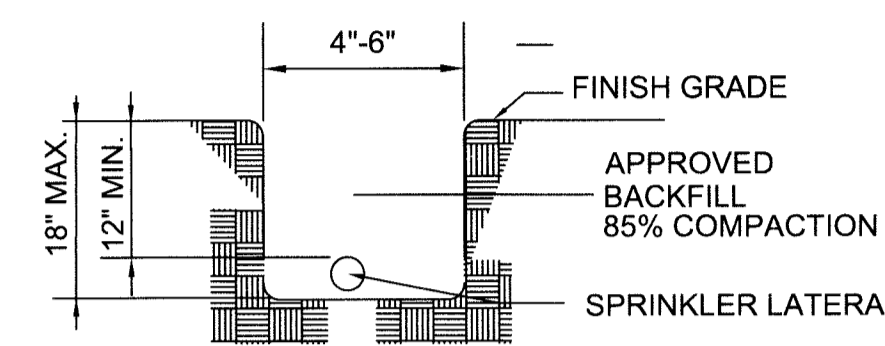
STANDARD TREE PLANTING DETAIL

NO SCALE



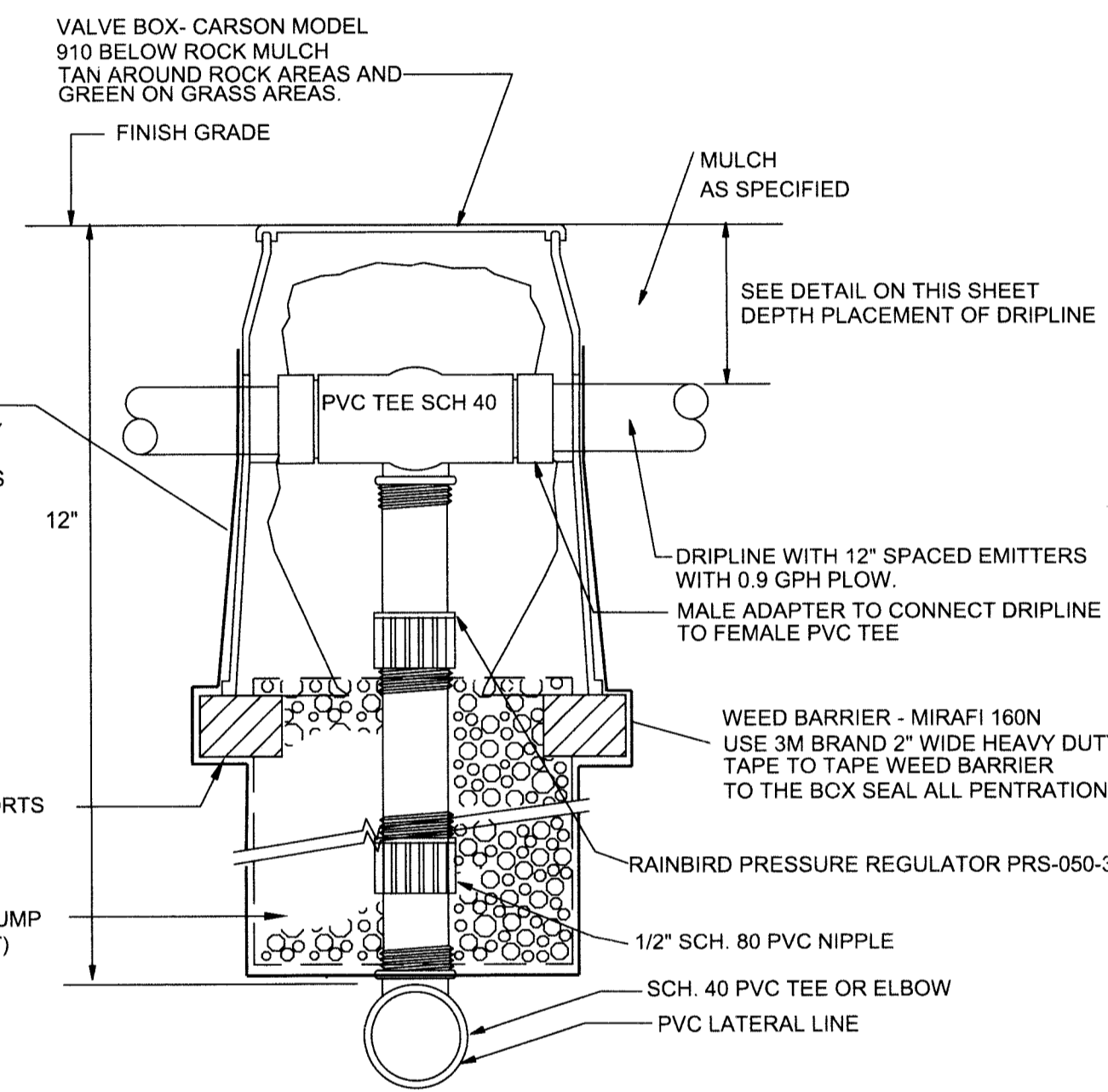
DEPTH OF SUB SURFACE DRIPLINE

NO SCALE



TRENCHING DETAIL - LATERALS

NO SCALE



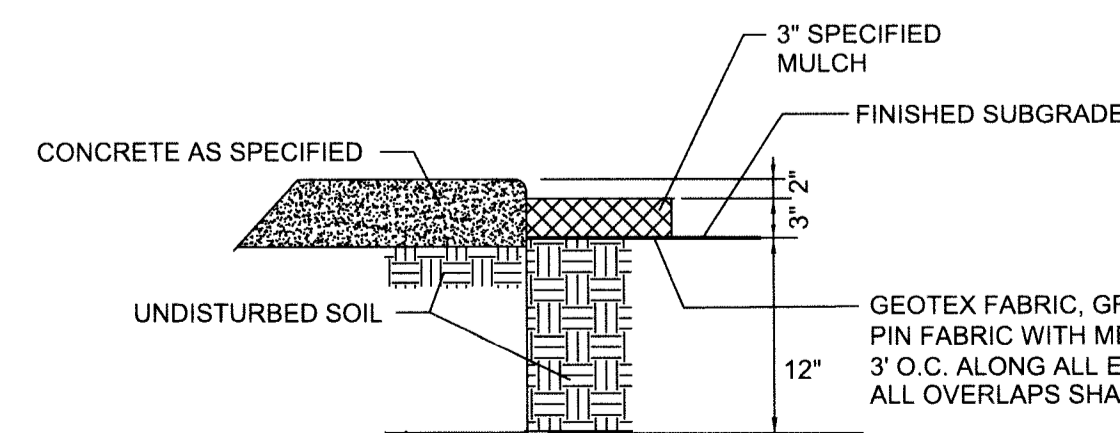
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 - 3) ALL VALVE AND EMITTER BOXES SHALL HAVE GEOTEX FABRIC INSTALLED UNDERNEATH AND TAPED TO SEAL ALL OPENINGS. TAPE SHALL BE 3M BRAND HEAVY DUTY PLASTIC TAPE ONLY, NO DUCT TAPE SHALL BE ALLOWED.
 - 4) ALL VALVE, EXTENSIONS AND EMITTER BOXES SHALL NOT REST OR CONTACT THE PVC PIPE OR DRIPLINE TUBING.
- NOTE:
- PLACEMENT OF ACCESS BOX FOR CONNECTION SHALL BE FIVE FEET (5') FROM THE TREE TRUNK ON THE WEST SIDE.

DRIPLINE CONNECT DETAIL

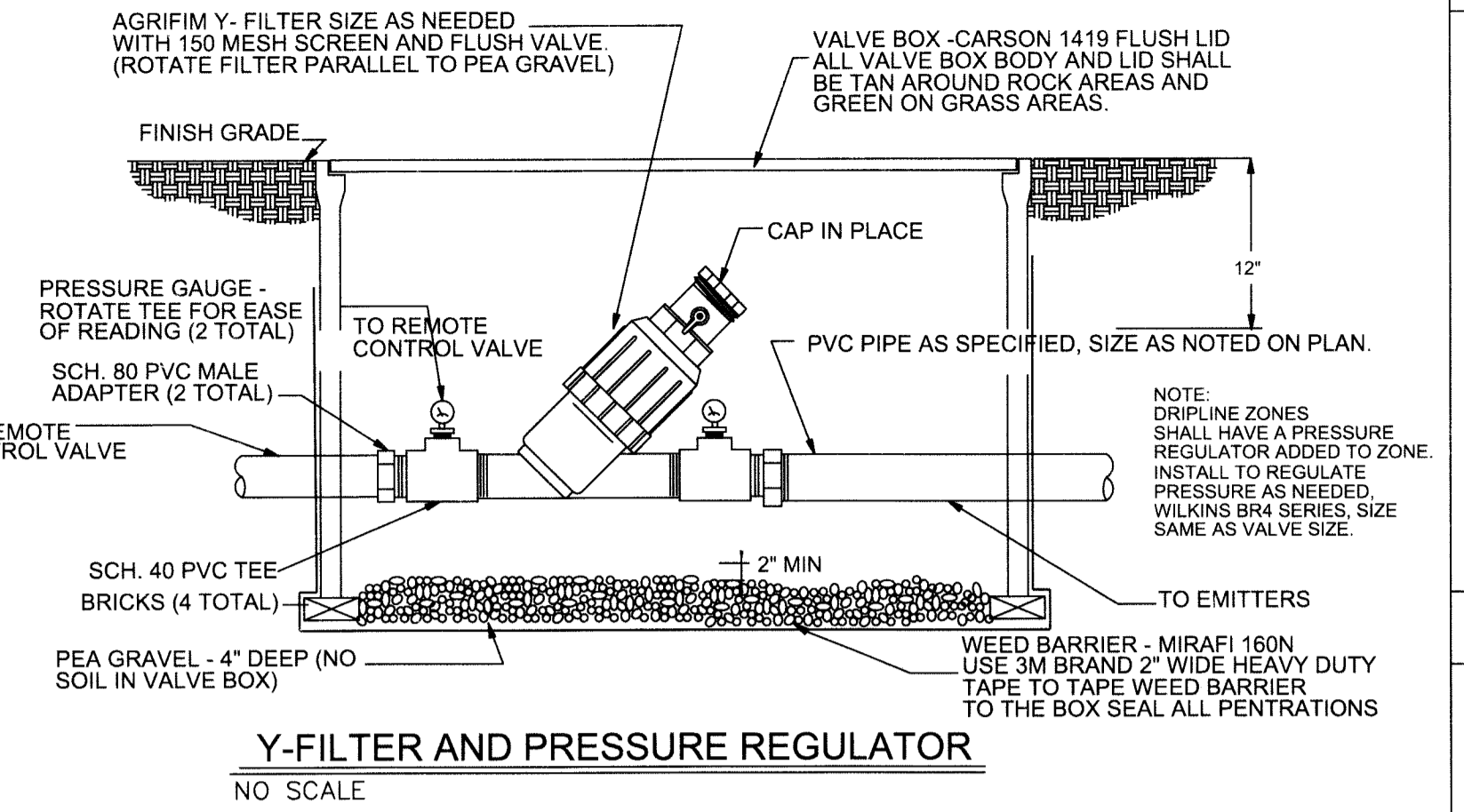
CONNECTION DETAIL BETWEEN DRIPLINE AND LATERAL

NO SCALE



MULCH PLACEMENT DETAIL

NO SCALE

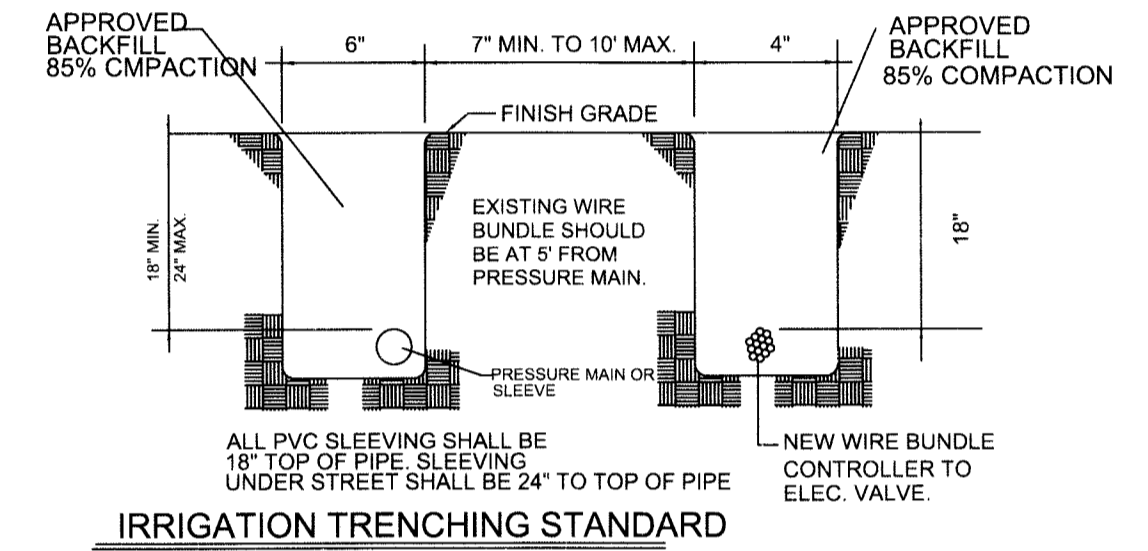


Y-FILTER AND PRESSURE REGULATOR

NO SCALE

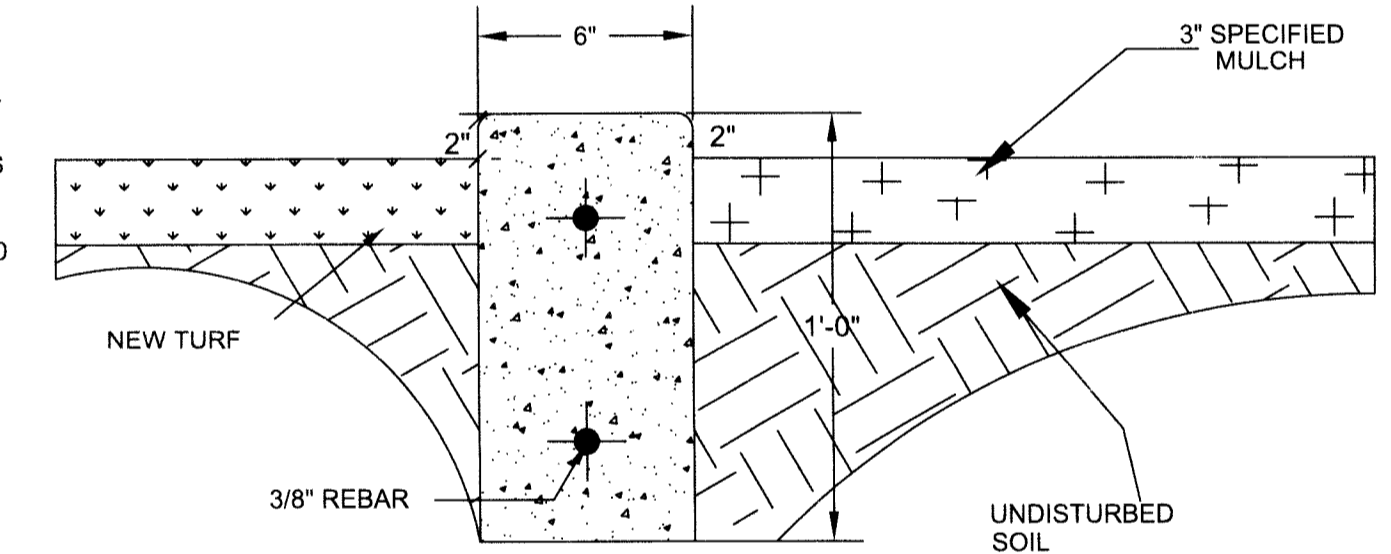
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IRRIGATION TRENCHING STANDARD

NO SCALE



CONCRETE HEADER CURB

NO SCALE

HEADER CURB NOTES:

1. HEADER CURBS SHALL BE 3,000 PSI CONCRETE STRENGTH.
2. HEADER CURBS HAND POURED AND PLACED SHALL INCLUDE:
 - (a) 2 CONTINUOUS #4 REBARS.
 - (b) WITH 1/2 INCH EXPANSION JOINTS EVERY 20.0 FEET AND CONTROL JOINTS EVERY 5.0 FEET, AND A BROOM FINISH.
3. HEADER CURBS MACHINE INSTALLED SHALL INCLUDE:
 - (a) 2.0 POUNDS OF LONG FIBERGLASS MESH CUBIC YARD.
 - (b) WITH 1/2 INCH EXPANSION JOINTS EVERY 20.0 FEET AND CONTROL JOINTS EVERY 5.0 FEET, AND A BROOM FINISH.

PARKS DEPARTMENT

APPROVED BY [Signature]



Final Approval

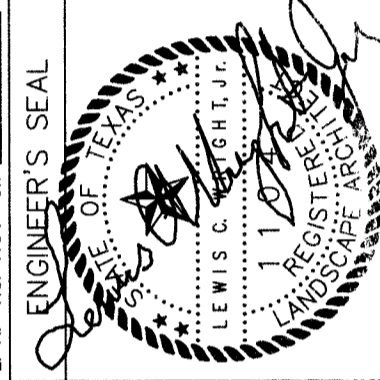
LANDSCAPE ARCHITECTURAL SERVICES

TEXAS LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT
2007 TEXAS AVENUE SUITE A EL PASO, TX 79901
PHONE: (915) 422-7739 EMAIL: lwrighttas@gmail.com

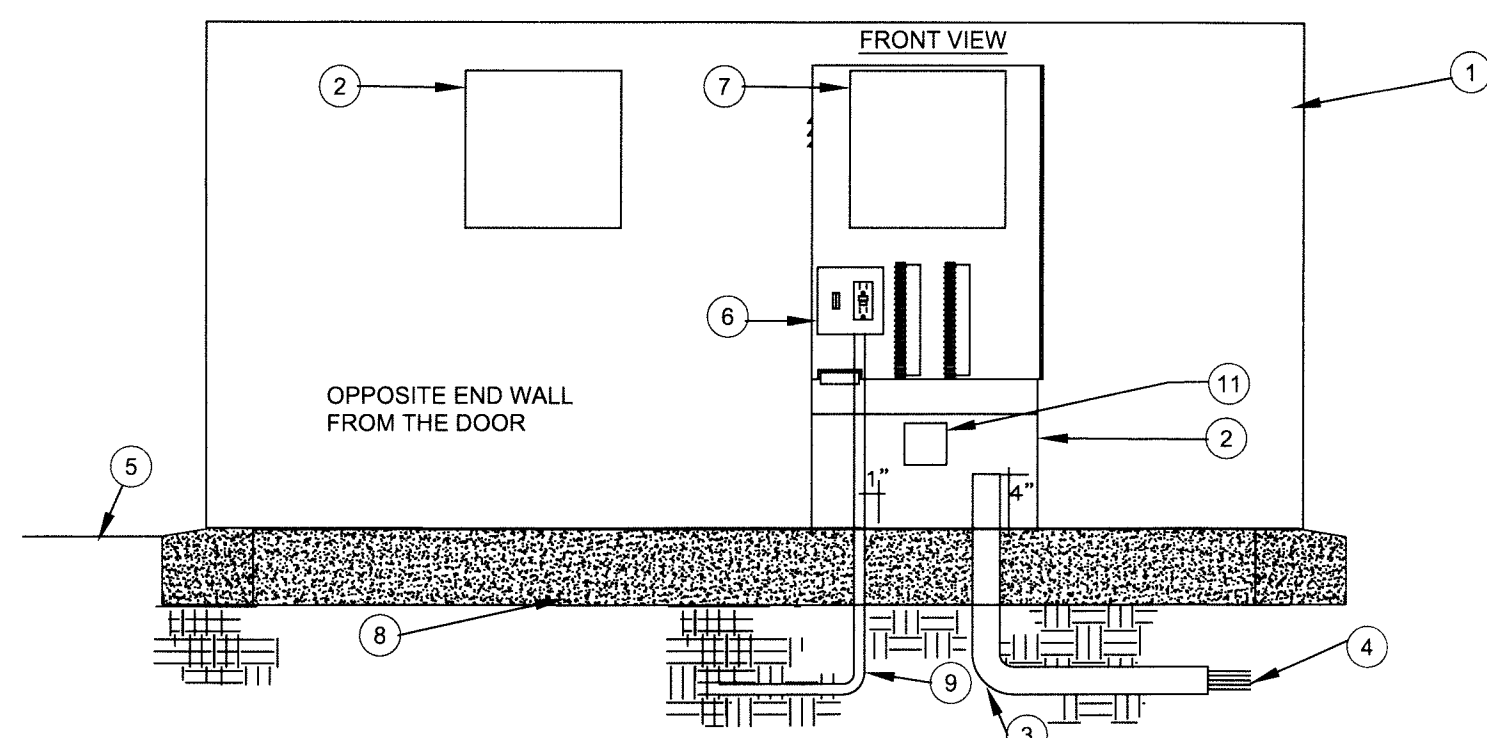
NEW MEXICO ARIZONA
LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT
2007 TEXAS AVENUE SUITE A EL PASO, TX 79901
PHONE: (915) 422-7739 EMAIL: lwrighttas@gmail.com

BY	
REVISIONS	LANDSCAPE AND IRRIGATION DETAILS
DATE	
PROJECT NAME	RIO DEL NORTE PARK
SCALE	N/A
CONTOUR INTERVAL	N/A
DATE	JUNE 2013
DESIGNER	L. WRIGHT
CHECKER	J. CERNA
DATE	9-15-13
PROJECT NO.	9-000-157-10
SHEET TITLE	LANDSCAPE AND IRRIGATION DETAILS
SHEET NO.	L-6.0

WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL
FIELD LOCATE ALL EXISTING
UNDERGROUND IMPROVEMENTS
IN PROJECT AREA

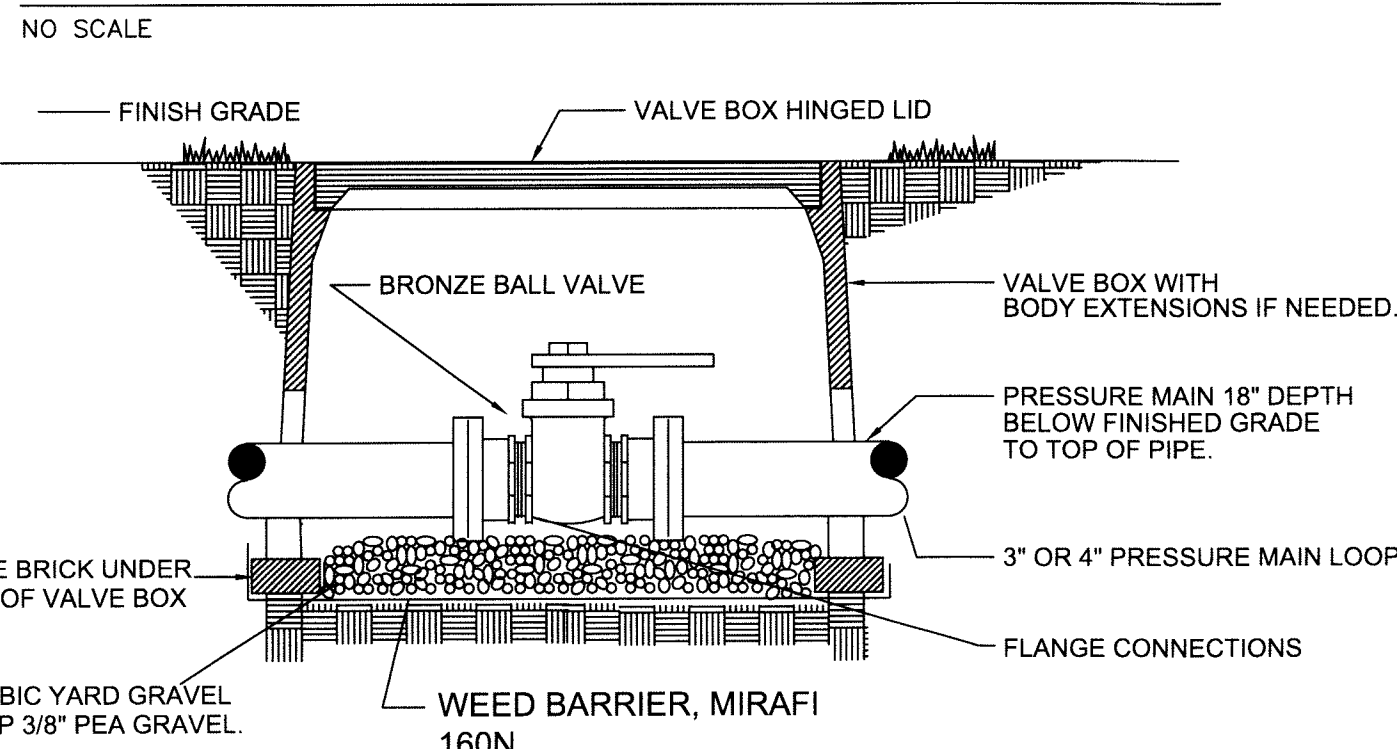


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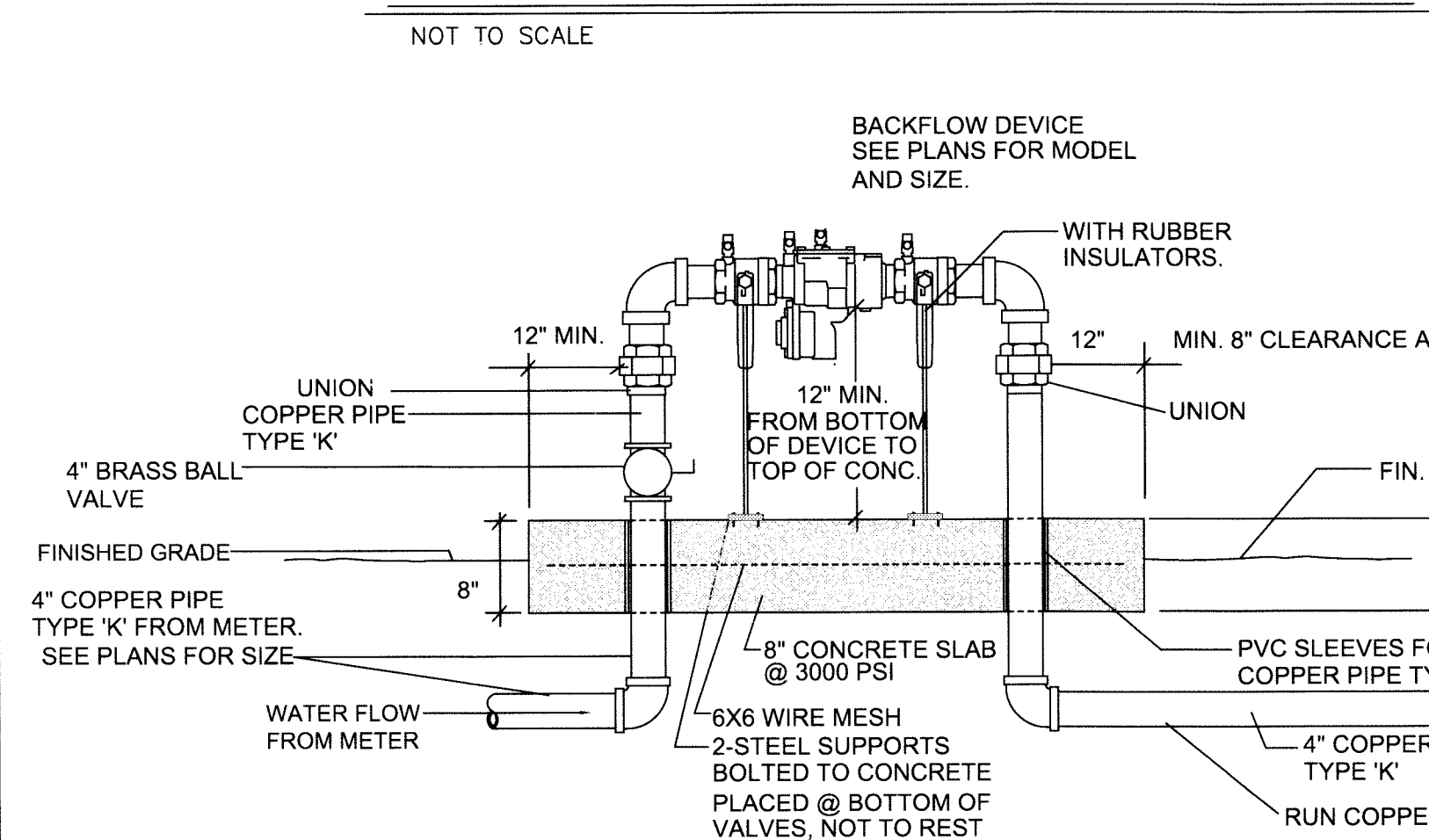


- LEGEND**
- TUFF SHED INTERIOR WALL OF PUMP HOUSE PROVIDE ALL BRACING AS NEEDED TO MOUNT PANELS.
 - PUMP CONTROL PANEL AND BREAKERS
 - PVC LONG SWEEP ELL-USE ONE SWEEP ELL PER CONTROLLER 18" DEEP.
 - DIRECT BURIAL CONTROL WIRES TO CONTROL VALVES. LABEL ALL WIRING AT CONTROLLER, PANELS AND AT VALVES WITH WEATHER PROOF TAGS. OR USE DIFFERENT COLOR FOR EA. VALVEWIRE AND PANEL WIRING.
 - FINISH GRADE.
 - CONTROLLER SUB-ASSEMBLY INCLUDES GFI OUTLET AND TOGGLE SWITCH, TERMINAL STRIPS WITH OUTLET, ONE CIRCUIT FULL TIME AND ONE FOR LIGHT MODEL AS-110-A. PROVIDE ELECTRIC CORD TO PLUG CONTROLLER TO OUTLET.
 - AUTOMATIC CONTROLLER. RAINBIRD ESP-SAT AND CCU WITH POWER CORDS. PROVIDE RAINBIRD MODEL MSP-1 SURGE PROTECTOR.
 - 3/4" WASHED PEA GRAVEL.
 - 120-VOLT SERVICE IN CONDUIT 3/8" DEEP.
 - LABEL ALL WIRING COMING INTO THE ENCLOSURE WITH WEATHER PROOF TAGS.
 - PROVIDE METAL ENCLOSURE WITH COVER TO HOUSE THE SURGE ARRESTOR.

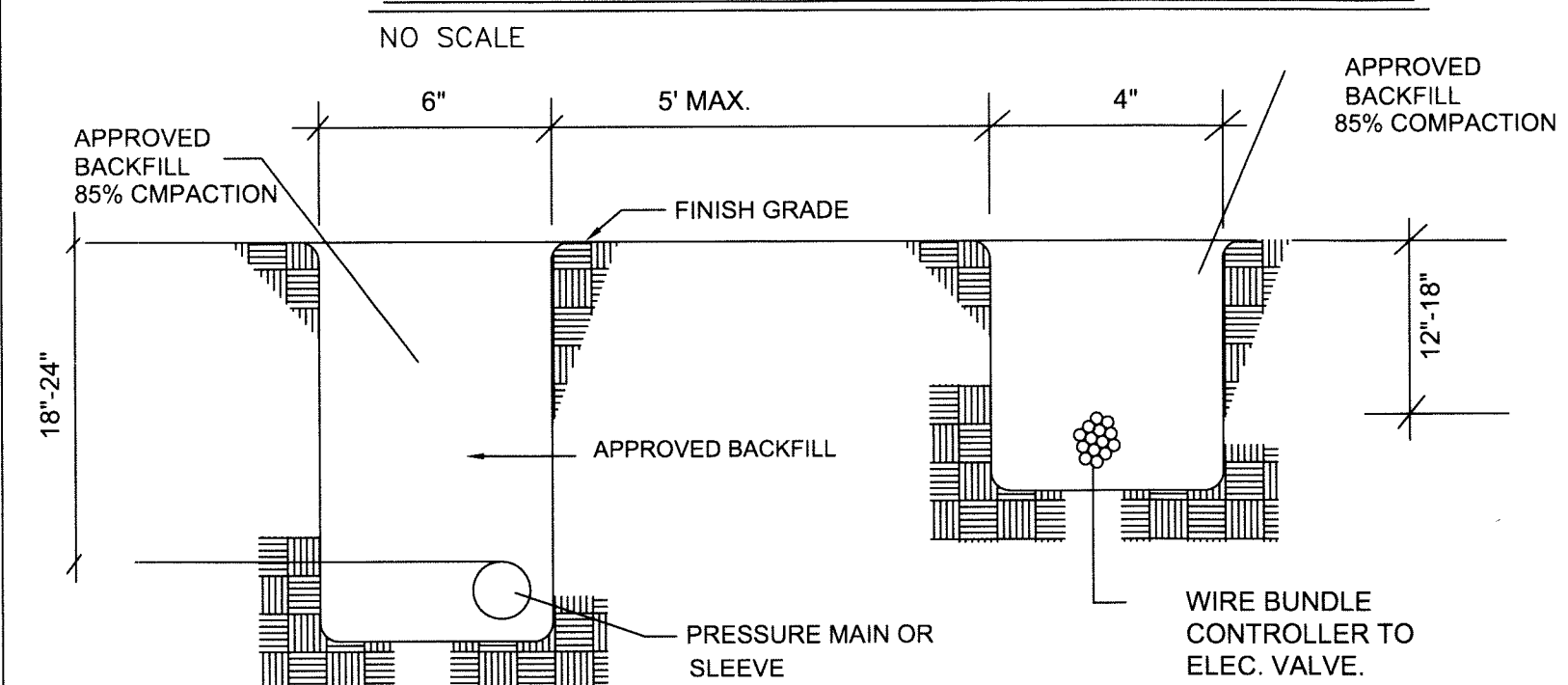
CONTROLLER ENCLOSURE DETAIL



SHUT OFF BALL VALVE DETAIL

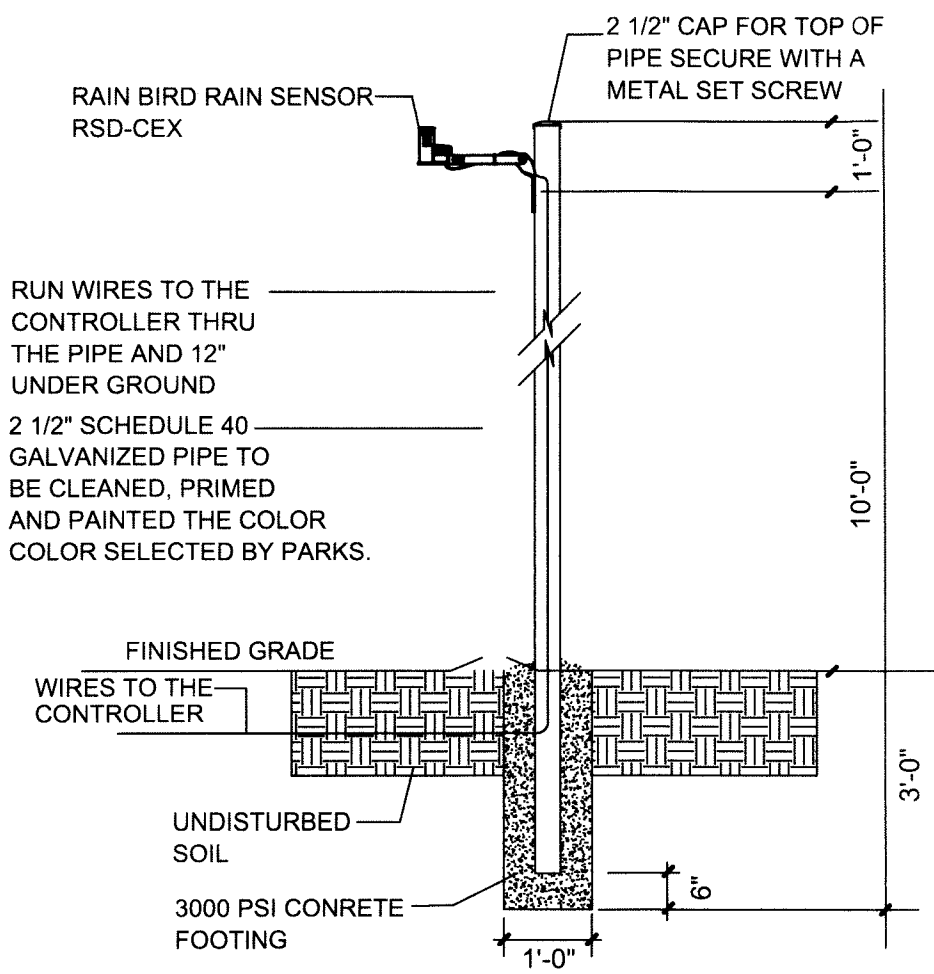


BACKFLOW DEVICE DETAIL



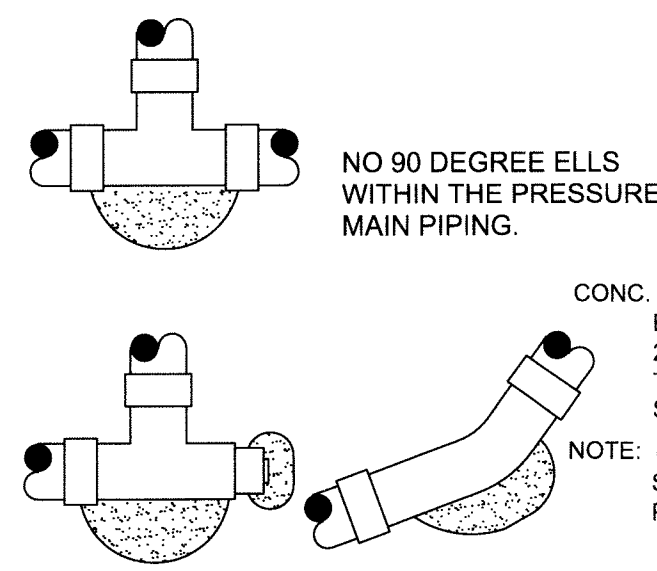
ALL PVC SLEEVING SHALL BE 18" TOP OF PIPE. SLEEVING UNDER STREET SHALL BE 24" TO TOP OF PIPE. NOTE: IF ROCKY CONDITIONS ARE ENCOUNTERED PROVIDE 4" MINIMUM DEPTH OF SAND BEDDING FOR PVC PIPE. SEE SPECIFICATIONS.

IRRIGATION TRENCHING STANDARD



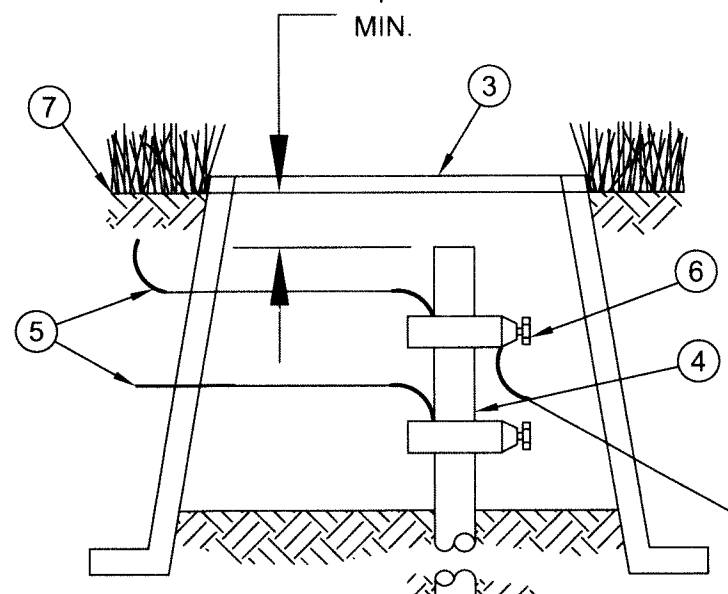
RAIN SENSOR DETAIL

NOTE: INSTALL MIN. OF 7" AWAY OF CONTROLLER ENCLOSURE OR TUFF SHED



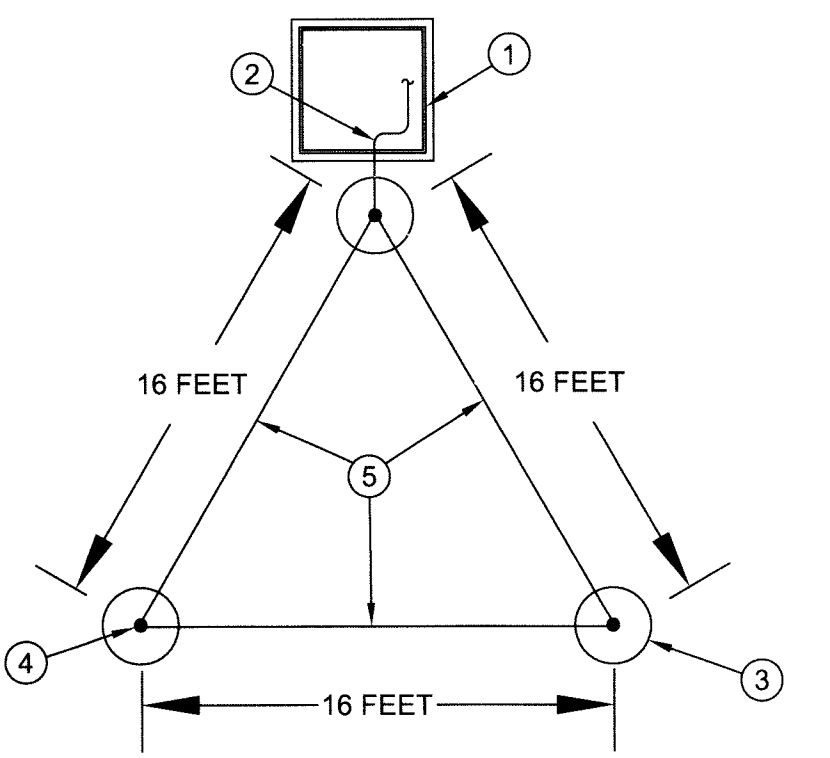
THRUST BLOCK DETAIL

NOTE: 1. INSTALL THRUST BLOCK ON 2 1/2" AND LARGER PVC PIPE APPLIES TO ALL 45 ELLS AND TEES IN THE PRESSURE MAIN. 2. ALL PVC FITTING SHALL BE MANUFACTURED BY LASCO

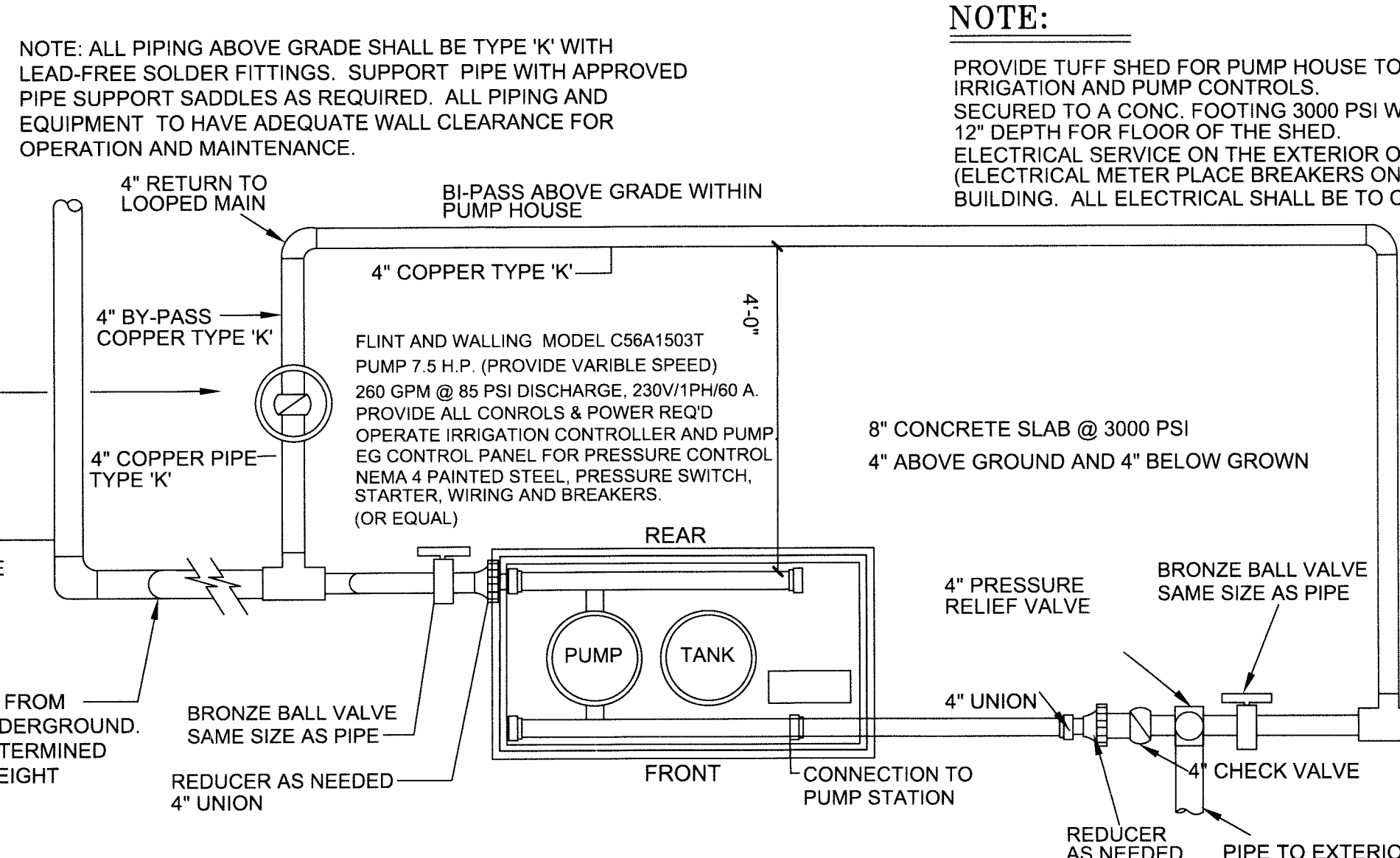


GROUND ROD ASSEMBLY

- RAIN BIRD CONTROLLER
- SOLID BARE COPPER WIRE (#10 AWG) FROM GROUNDING ROD TO CONTROLLER. MAKE WIRE AS SHORT AND STRAIGHT AS POSSIBLE
- COVER GROUNDING ROD WITH 10-INCH ROUND VALVE BOX AS SHOWN
- 5/8-INCH X 8 FT COPPER CLAD GROUNDING ROD OR GROUNDING PLATE. INSTALL RODS IN SOIL IN A TRIANGULAR PATTERN SPACED A MINIMUM OF 16 FT APART FROM EACH OTHER. GROUNDING GRID TO HAVE A RESISTANCE OF TEN (10) OHMS OR LESS
- BARE COPPER WIRE (#10 AWG MIN.) BETWEEN GROUNDING RODS
- GROUND ROD CLAMP 1 ONLY!!!
- FINISH GRADE



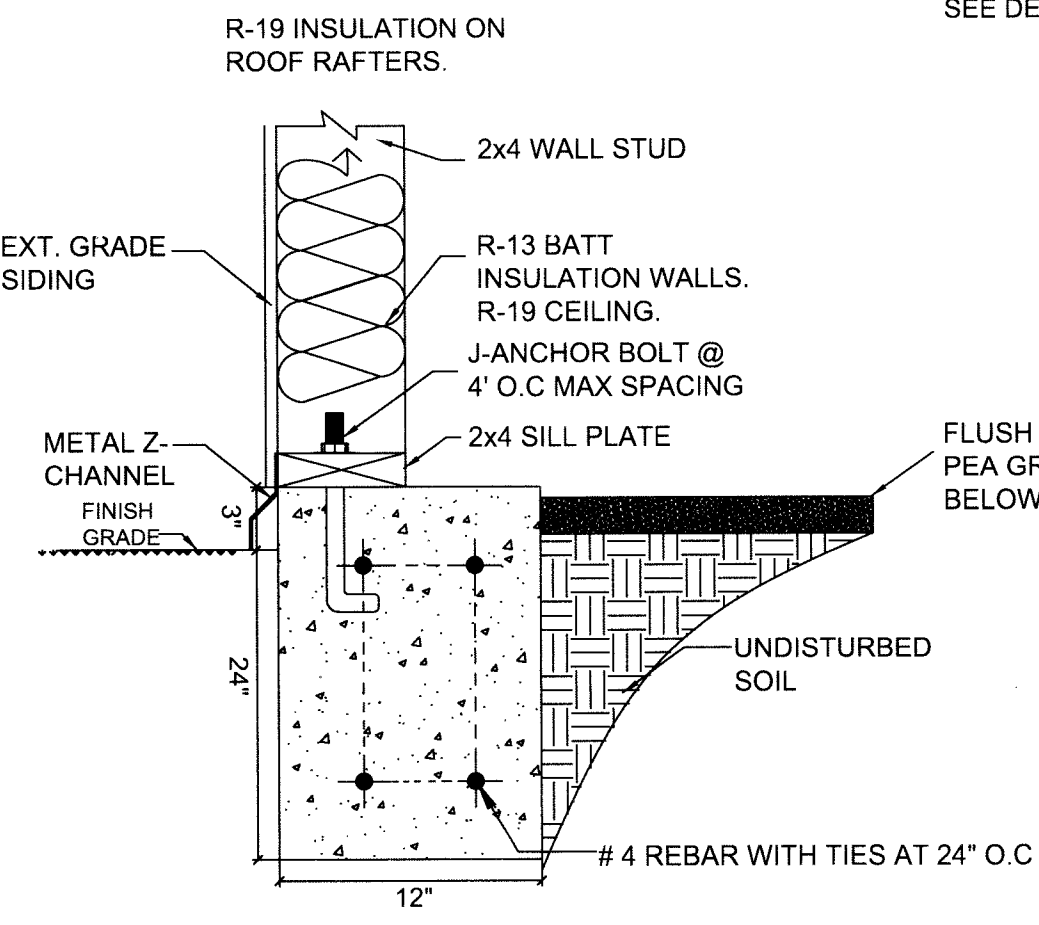
EQUILATERAL TRIANGULAR GROUND GRID



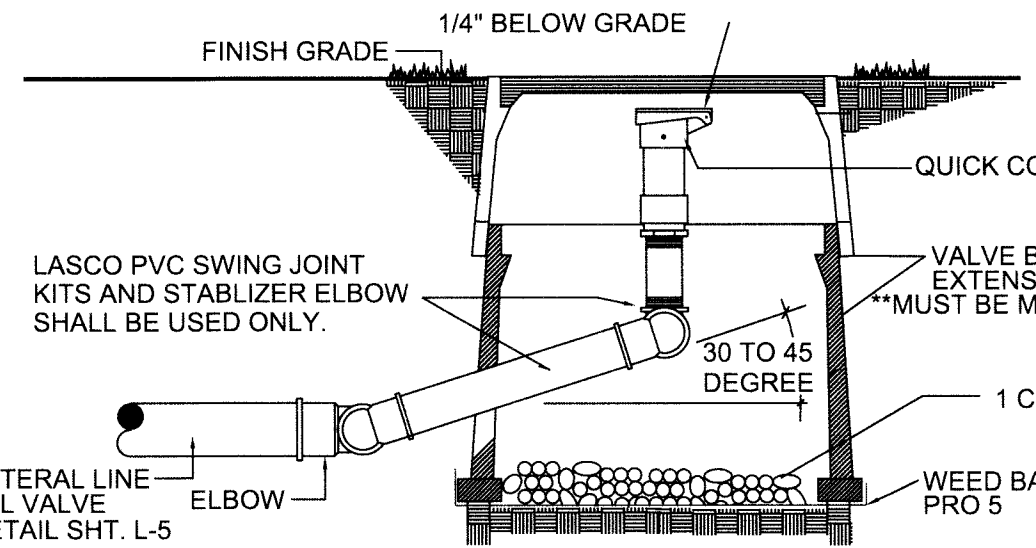
BOOSTER PUMP DETAIL

- PRESSURE RELIEF VALVE 4" BRONZE BODY WITH PRESSURE SET AT 125 PSI FEMALE INLET & OUTLET WATTS MODEL No. 174A OR APPROVED EQUAL.
- PRESSURE GAUGE: STAINLESS STEEL CASE BRONZE BOURDON TUBE AND BRASS SOCKET. DRY CONSTRUCTION CALIBRATED 0 TO 200 PSI. MARSHALL TOWN MODEL No 185 OR APPROVED EQUAL.
- CHECK VALVE: IRON BODIED SWINK CHECK VALVE, 4", RATED 200 PSI AMERICAN VALVE MFG. MODEL No WOG OR APPROVED EQUAL.
- VIBRATION ISOLATORS: STEEL OR CAST IRON HOUSINGS INCORPORATING ONE OR MORE STEEL BUILT-IN SPRINGS AND SHALL BE PROVIDED WITH BUILT-IN LEVELING BOLTS AND BUILT-IN RESILIENT CHOCKS TO CONTROL OSCILLATIONS AND WITHSTAND LATERAL FORCES IN ALL DIRECTIONS. KORFUND SERIES L OR APPROVED EQUAL INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS
- INSULATE ALL PIPING NEW AND EXISTING WITH A RIDGE INSULATE COVERED WITH ALUMINUM JACKET. OR APPROVED EQUAL.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT, SENSORS, WIRING, RELAYS, CONNECTORS, ETC. TO ALLOW BOTH PUMPS TO OPERATE ON PRESSURE DEMAND.

PUMP HOUSE FOOTING

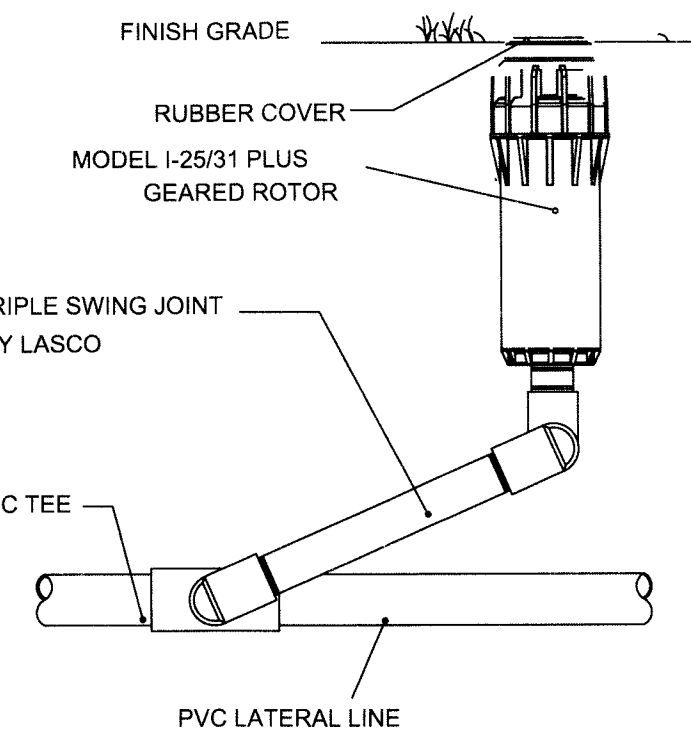


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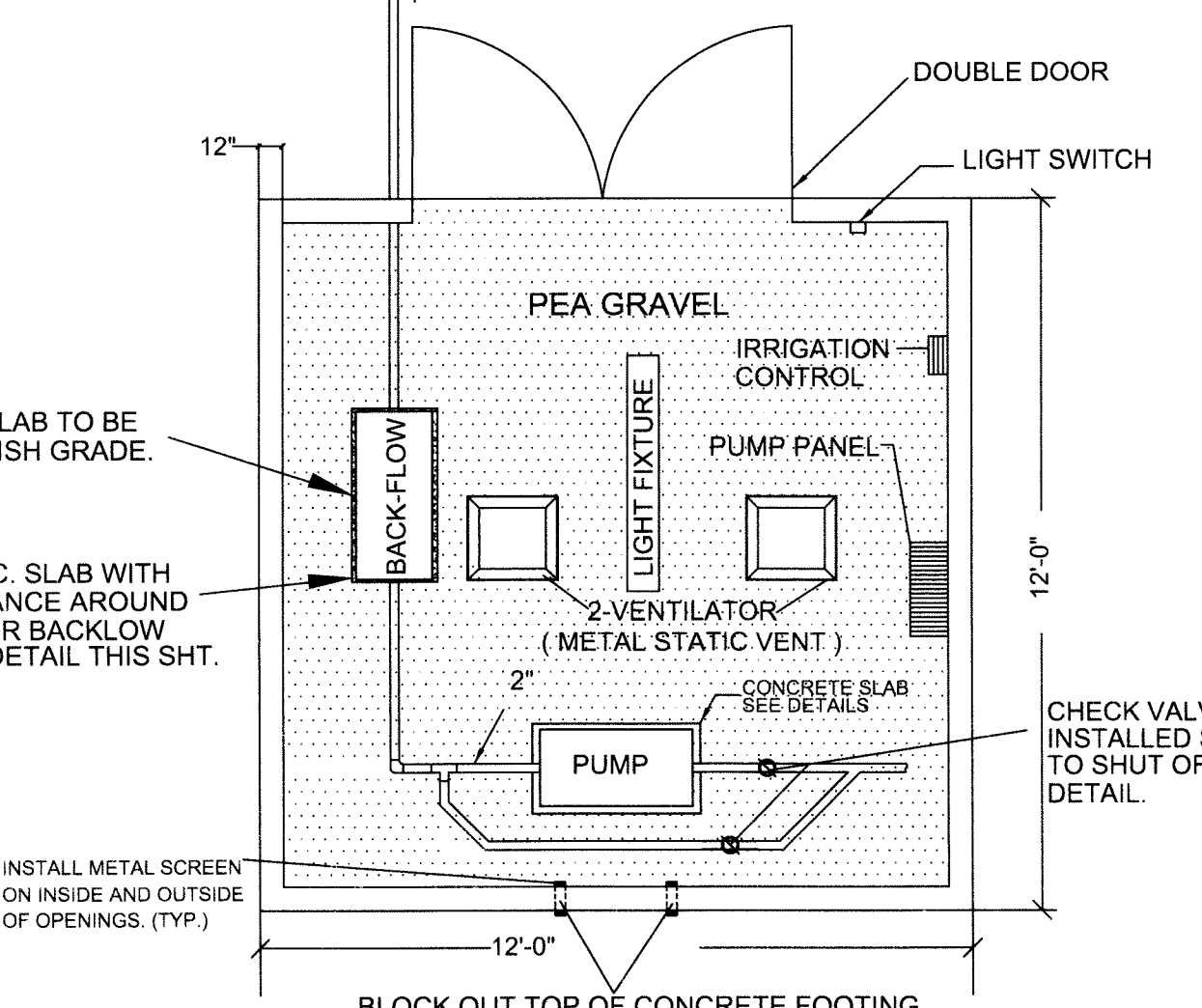
QUICK COUPLING DETAIL

NOTE: a. LOCKABLE QUICK COUPLER CAP. b. PURPLE WEATHER PROOF TAGS THAT READ, "NON-POTABLE WATER, NOT SAFE FOR DRINKING AND PURPLE COLOR VALVE BOXES."



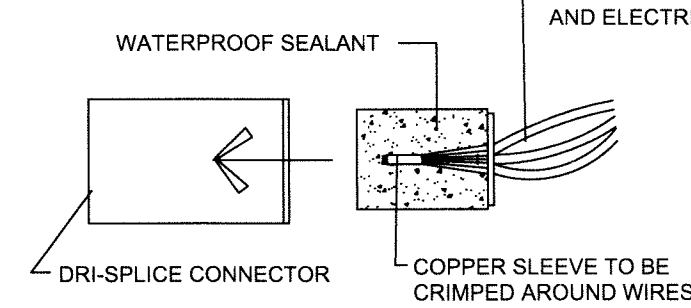
1-25 HUNTER SPRINKLER HEAD

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PUMP HOUSE PLAN

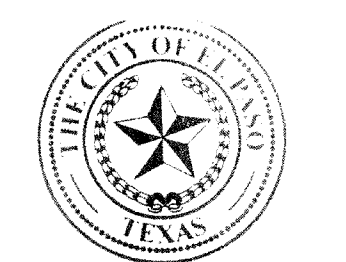
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WIRE CONNECTORS

NO SCALE

PARKS DEPARTMENT
APPROVED BY [Signature] 5/21/15



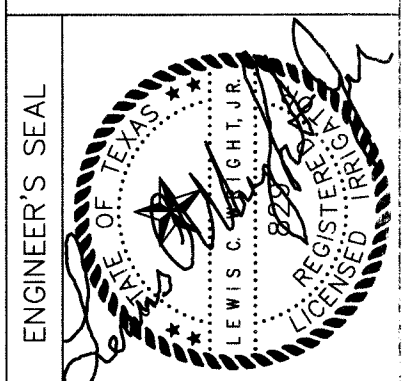
IRRIGATION IS REGULATED BY: TCEQ
PO BOX 13087
AUSTIN, TEXAS 78711-3087
512 239-6719
CHAPTER 34, TEXAS WATER CODE
IRRIGATOR'S LIC. # 829

TEXAS LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT
2007 TEXAS AVENUE SUITE A EL PASO, TX 79901
PHONE: (915) 422-7739 EMAIL: lwright@lasc.com

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DATE	REVISIONS

WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL
FIELD LOCATE ALL EXISTING
UNDERGROUND IMPROVEMENTS
IN PROJECT AREA



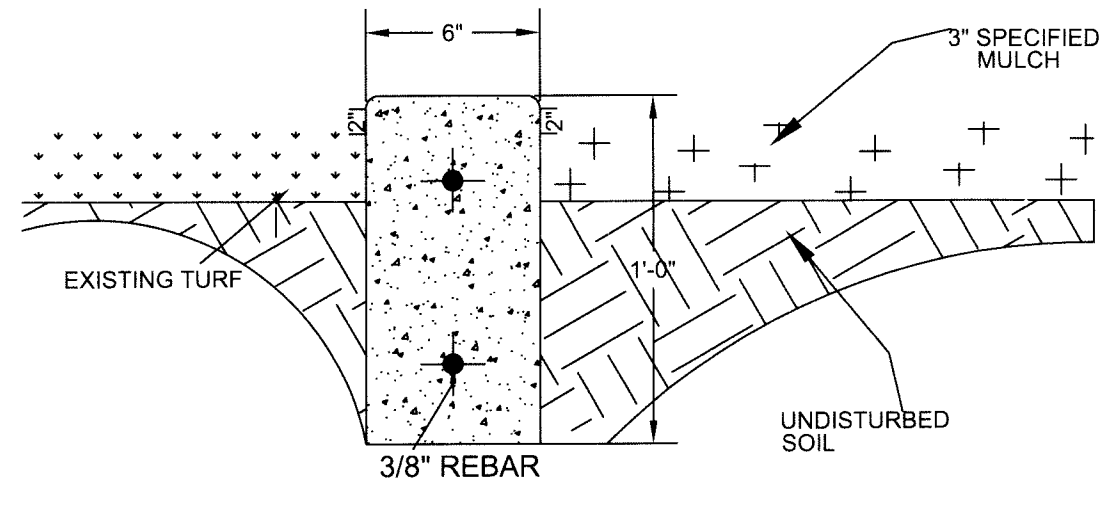
Horizontal	Vertical	Contour Interval	DATE	DESIGN BY	DRAWN BY	CHECK BY	APPROV. BY	JOB No.
N/A	N/A	N/A	JUNE 2013	L. WRIGHT	J. CERNA	LW	L. WRIGHT	2000-157-1-D

PROJECT NAME
RIO DEL NORTE PARK
6700 RIO HACIENDA CIRCLE
EL PASO COUNTY, TEXAS
LOT 8, BLOCK 5
HACIENDA DEL RIO UNIT 1
2.28 ACRES, TOTAL OF 99,318 SQ.FT.

SHEET TITLE
IRRIGATION DETAILS

SHEET NO.

L-7.0



NOTES

- HEADER CURBS SHALL BE 3000 PSI CONCRETE STRENGTH.
- HEADER CURBS HAND POURED AND PLACED SHALL INCLUDE:
 - 2 CONTINUOUS #4 REBAR
 - WITH 1/2 INCH EXPANSION JOINTS EVERY 20.0 FEET AND CONTROL JOINTS EVERY 5.0 FEET, AND A BROOM FINISH.
- HEADER CURBS MACHINE INSTALLED SHALL INCLUDE:
 - 2.0 POUNDS OF LONG FIBERGLASS MESH CUBIC YARD.
 - WITH 1/2 INCH EXPANSION JOINTS EVERY 20.0 FEET AND CONTROL JOINTS EVERY 5.0 FEET, AND A BROOM FINISH.

HEADER CURB

NO SCALE

NOTES FOR PLANTING:

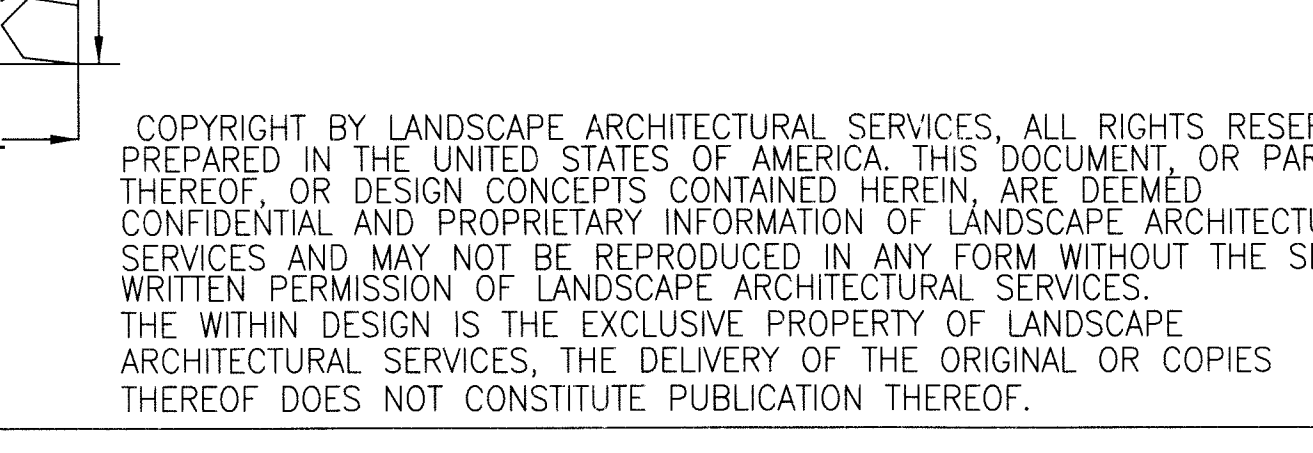
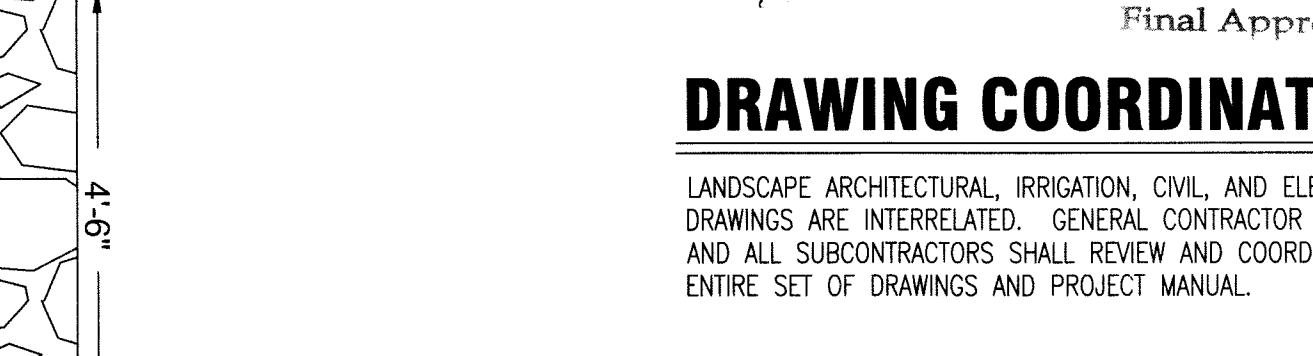
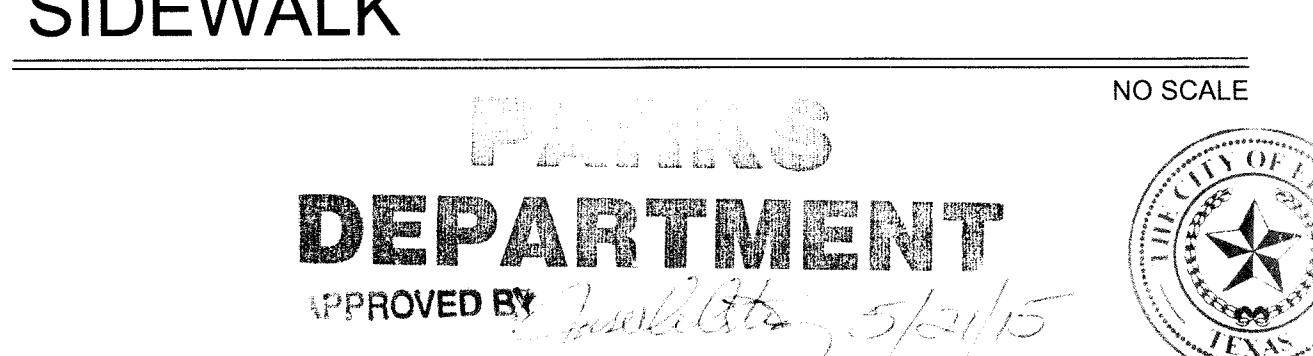
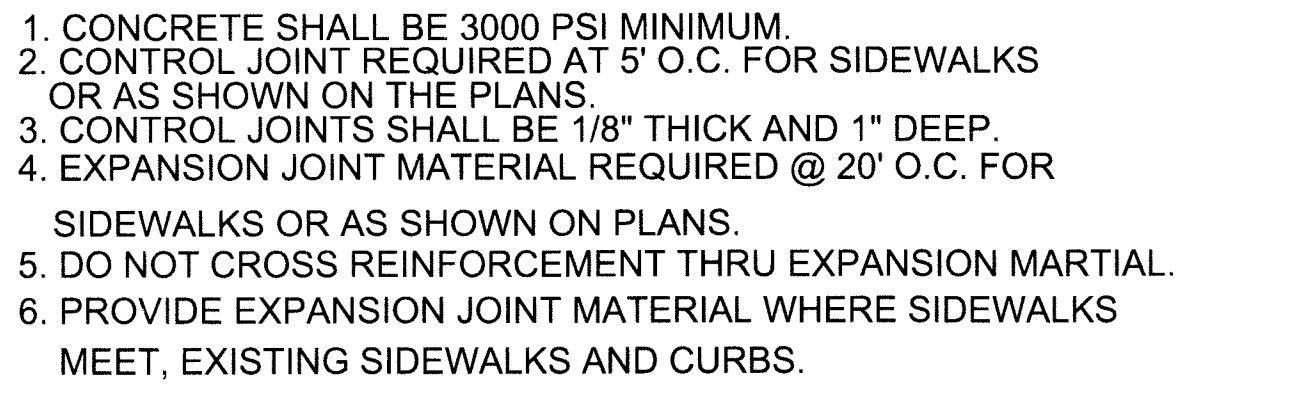
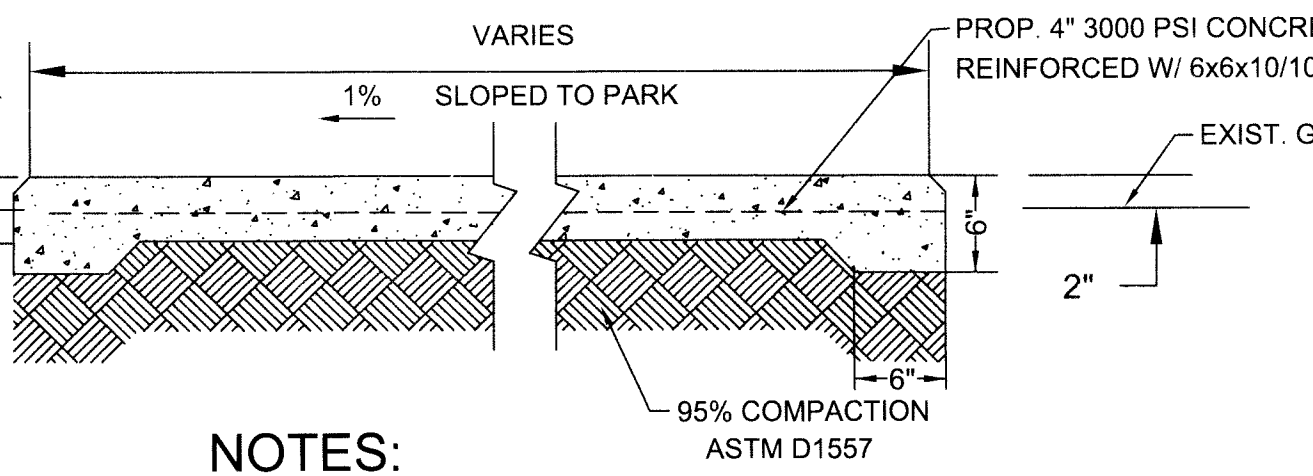
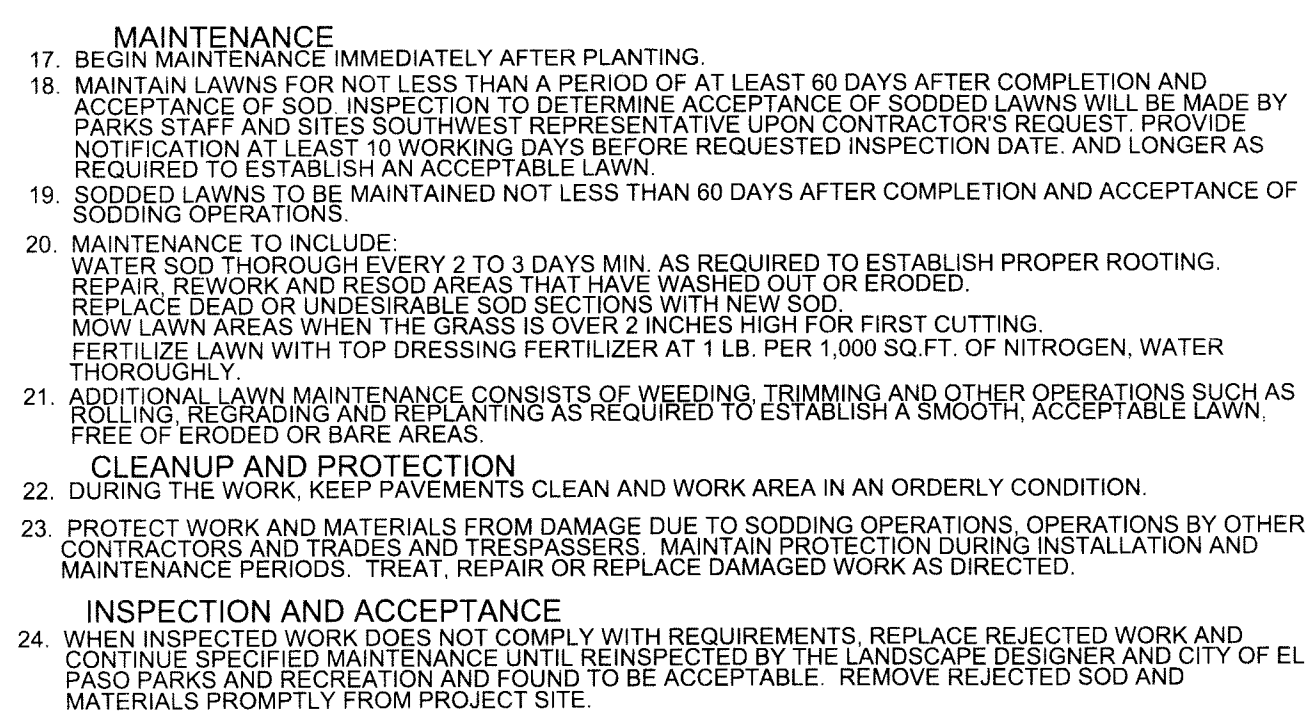
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PREVENT PLANTS FROM FALLING OR BEING BLOWN OVER AND TO STRAIGHTEN OR REPLANT ALL PLANTS WHICH ARE DAMAGED DUE TO WIND. PLANTS BLOWN OVER BY HIGH WINDS SHALL NOT BE A CAUSE FOR ADDITIONAL EXPENSE TO THE OWNER, BUT SHALL BE THE FINANCIAL RESPONSIBILITY OF CONTRACTOR.
- TOPSOIL MATERIAL FOR PLANTING SHALL BE FREE FROM HARD CLODS, STIFF CLAY, HARD PAN, STONES LARGER THAN 1" IN DIAMETER, NOXIOUS WEEDS AND PLANTS, SOD, PARTIALLY DISINTEGRATED DEBRIS, INSECTS OR ANY OTHER UNDESIRABLE MATERIAL. PLANTS OR SEEDS THAT WOULD BE TOXIC OR HARMFUL TO GROWTH.
- CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF PLANT MATERIAL QUANTITIES.
- IN THE EVENT OF VARIATION BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THE PLANS, THE PLANS SHALL CONTROL. IMPROPER PLANT COUNT MADE BY THE LANDSCAPE CONTRACTOR SHALL BE NO CAUSE FOR ADDITIONAL COSTS TO THE OWNER.
- THE CONTRACTOR SHALL MEET BOTH THE CONTAINER SIZE AND CALIPER SIZE, AS WELL AS HEIGHT AND SPREAD SPECIFICATIONS SPECIFIED.
- EXCAVATE TWO TIMES GREATER THAN THE ROOT BALL DIAMETER OF THE SHRUB, TWO TIMES GREATER THAN THE ROOT BALL FOR TREES. SCARIFY BOTTOM OF PLANTING PIT BEFORE PLACING PLANT. PLACEMENT OF PLANT SHALL BE PERPENDICULAR TO GROUND.
- CONTRACTOR WILL NOT PLANT MATERIAL SHOWN ON PLANS WHEN IT IS EVIDENT THAT FIELD CONDITIONS HAVE CHANGES SINCE PLANS WERE DRAWN. ANY CHANGES ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE DESIGNER BEFORE ANY PLANTING IS DONE IN THE AREA.
- PLANT SUBSTITUTIONS WILL BE PERMITTED, REQUEST SUBSTITUTION IN WRITING GIVING REASONS FOR SUCH SUBSTITUTIONS.
- TURF QUANTITY TAKE-OFF ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- TREAT ALL PLANTING AREAS WITH AN APPLICATION OF SURF. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR APPLICATION.
- REMOVE ALL WIRE, STRING, WIRE BASKETS, BURLAP, CONTAINERS, ETC., FROM THE ROOTBALL OF PLANTS BEFORE BACKFILLING THE PLANTING HOLE.
- SEDED AREAS SHOULD BE MAINTAINED UNTIL A FULL GROWTH OF WILD GRASS OR SEDED MATERIAL IS ACHIEVED.
- WARRANTY FOR THE PLANTING MATERIAL SHALL BE ONE YEAR FROM THE DATE OF ACCEPTANCE. (TREES, SHRUBS AND GROUND COVER).

GENERAL NOTES

- THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING HIS BID.
- CONTRACTOR SHALL BE FAMILIAR WITH PLANS, DETAILS AND SPECIFICATIONS AS THEY PERTAIN TO THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER'S REPRESENTATIVE IF ANY ITEMS CONTAINED WITHIN THE SCOPE OF WORK DEFINED HEREIN, ARE IN CONFLICT WITH THE PROPOSED CONTRACT.
- EXISTING UTILITY LINES ARE TO BE BLUE STAKED PRIOR TO EXCAVATION. CHECK AND FIELD VERIFY ALL SITE CONDITIONS, UTILITIES AND SERVICES PRIOR TO EXCAVATION. CONSTRUCTION WORK IN CLOSE PROXIMITY TO UNDERGROUND UTILITIES SHALL BE COORDINATED WITH APPROPRIATE AGENCY.
- THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH OWNER, ALL AFFECTED UTILITY COMPANIES, AND ALL OTHER ENTITIES HAVING JURISDICTION OVER THE PROJECT.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES PRIOR TO COMMENCING WITH THE WORK. ANY DISCREPANCY NOTED SHALL BE REPORTED IMMEDIATELY TO THE PROJECT MANAGER. FAILURE OF THE CONTRACTOR TO REPORT ANY FIELD AND PLAN DISCREPANCIES SHALL MAKE THE CONTRACTOR RESPONSIBLE FOR WORK THAT IS PERFORMED.
- VIBRATORY ROLLERS SHALL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT, UNLESS APPROVED IN WRITING BY THE CITY ENGINEER.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN STRICT CONFORMANCE WITH ALL CURRENT SAFETY CODES AND STANDARDS, INCLUDING BUT NOT LIMITED TO, OSHA REQUIREMENTS.
- WARNING! BEFORE EXCAVATING, CONTRACTOR SHALL LOCATE AND PROTECT ALL UNDERGROUND UTILITIES LINES. CONTRACTOR SHALL REPLACE ANY UTILITIES DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO OWNER.
- CONTRACTOR SHALL WATER CONSTRUCTION SITE AREA A MINIMUM OF TWICE A DAY TO DUST CONTROL, ONCE IN THE MORNING AND ONCE IN THE AFTERNOON. THIS SHALL ALSO BE DONE ON WEEKENDS AND HOLIDAYS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING IMPROVEMENTS IN THE PROJECT AREA AND ITS VICINITY. ANY DAMAGE RESULTING FROM CONTRACTOR WORK SHALL BE RESTORED AT NO COST TO OWNER.
- CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATION DURING CONSTRUCTION ACTIVITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ENVIRONMENTAL FINES RESULTING FROM HIS/HER WORK AND HOLD THE OWNER HARMLESS IN SUCH CASES.
- CONTRACTOR SHALL SECURE THE SITE DURING CONSTRUCTION TO PROTECT THE AREA FROM VANDALISM AND ILLEGAL TRESPASSING. CONTRACTOR SHALL SECURE THE SITE AT HIS/HER OWN COST. CONTRACTOR SHALL SITE PROTECTION MEASURES SHALL BE SUBMITTED TO THE PARKS AND RECREATION DEPT. FOR APPROVAL.
- ALL EXISTING UTILITIES CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION EXCEPT AS NOTED IN THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES (INCLUDING SERVICE CONNECTIONS) FROM DAMAGE AS A RESULT OF CONSTRUCTION ACTIVITIES.
- PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO VERIFY LOCATION OF EXISTING UTILITIES & CONTRACTOR SHALL CALL THE RESPECTIVE "1-CALL" NUMBER FOR SUCH UTILITIES.
- CONTRACTOR SHALL INSURE THE FOLLOWING: ALL ACCESSIBLE ROUTES SHALL NOT EXCEED A RUNNING SLOPE GREATER THAN 1.20(6%). NO WHERE SHALL THE CROSS SLOPE OF AN ACCESSIBLE ROUTE EXCEED 1.50(2%). MAXIMUM SLOPE OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1.20(6%). MAXIMUM RUNNING SLOPE OF ANY CURB RAMP SHALL NOT EXCEED 1:12(8.33%) SLOPE. ALL ACCESSIBLE PATHS SHALL COMPLY WITH TAS AND ADAAG.

SODDING NOTES

- SUBMIT THE FOLLOWING:**
- SOD SPECIFICATION FOR GRASS SPECIES AND NAME AND LOCATION OF SOD SOURCE. SODDING SCHEDULE, INCLUDING DATES AND TYPE OF WORK TO BE PERFORMED. PRIOR TO ORDERING, NAME OF SUPPLIER OF SOD MATERIALS.
 - QUALITY ASSURANCE
 - MINIMUM AGE 18 MONTHS WITH ROOT DEVELOPMENT THAT WILL SUPPORT ITS OWN WEIGHT WITHOUT TEARING WHEN REMOVED VERTICALLY BY HOLDING THE UPPER TWO CORNERS.
 - DELIVERY, STORAGE AND HANDLING.
 - TIME DELIVERY SO THAT SOD WILL BE UNLOADED WITHIN 24 HOURS OF DELIVERY AT SITE. PROTECT AGAINST DRYING AND BREAKING OF ROLLED STRIPS.
 - DELIVER PACKAGED MATERIALS IN CONTAINERS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. PROTECT MATERIALS FROM DETERIORATION DURING DELIVERY AND WHILE STORED ON SITE.
 - SITE CONDITIONS**
 - PROCEED WITH AND COMPLETE LANDSCAPE WORK AS RAPIDLY AS PORTIONS OF SITE BECOME AVAILABLE. WORKING WITHIN SEASONAL LIMITATIONS FOR EACH KIND OF LANDSCAPE WORK REQUIRED.
 - WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL AT PASEO PARKS AND RECREATION BEFORE PLANTING.
 - PLANT OR INSTALL MATERIALS DURING NORMAL PLANTING SEASONS FOR EACH TYPE OF LANDSCAPE WORK REQUIRED. PROTECT PLANTING WITH SPECIFIED MAINTENANCE PERIODS TO PROVIDE MAINTENANCE FROM DATE OF FINAL ACCEPTANCE.
 - SOIL AMENDMENTS**
 - PROTECT SOIL QUALITY BEFORE ADDITION OF SOIL AMENDMENTS & ANALYSIS OF SOIL AMENDMENTS. ORGANIC AMENDMENTS SHALL CONSIST OF WELL-AGED ORGANIC COMPOST OR APPROVED EQUAL.
 - FERTILIZER**
 - SLOW-RELEASE STARTER FERTILIZER ANALYSIS AS RECOMMENDED BY LANDSCAPE ARCHITECT BY WEIGHT AT A RATE OF 1 LB OF ACTUAL NITROGEN PER 1,000 SQUARE FEET BY WEIGHT.
 - GRASS MATERIALS**
 - PROVIDE STRONGLY ROOTED SOD, NOT LESS THAN 18 MONTHS OLD AND FREE OF WEEDS AND UNDESIRABLE NATIVE GRASSES AND MACHINE CUT TO PAD THICKNESS TO BE 1" IN LIEU OF 3/4" (PLUS OR MINUS 1/4") EXCLUDING TOP GROWTH AND THATCH. PROVIDE SOD CAPABLE OF 3/4" AND 3/4" SLOPES WHEN PLANTED. CUT SOD PIECES A MINIMUM OF 16" WIDE.
 - PREPARATION**
 - PRIOR TO START OF SOIL PREPARATION ALL FINISH GRADES SHALL BE ESTABLISHED AND APPROVED AS NOTED ON THE DRAWINGS. CONTRACTOR SHALL PREPARE THE SITE AT HIS/HER OWN COST. A UNIFORM ONE-INCH LAYER (3" MINIMUM) OF ORGANIC SOIL AMENDMENT, AFTER APPLICATION OF ORGANIC AMENDMENT AND STARTER FERTILIZER ALL AREAS TO BE SODDED SHALL BE THOROUGHLY ROTOTILLED TO A MINIMUM DEPTH OF 12 INCHES. AFTER ROTOTILLING COMPLETE AT GROSS DIRECTIONS, GRAB AND LASER LEVEL TO AN EVEN GRADE. THEN ROLL FOR FIRMNESS. RAKE TILLED AREA AND REMOVE STONES OVER 1 INCH IN ANY DIRECTION. STAGGER STRIPS TO OPE-GET JOINTS IN ADJACENT COURSES. LAY SOD PARALLEL TO CONTOURS OF SLOPE. WORK FROM BOARDS TO AVOID DAMAGE TO SOD OR SOD. TAMP FIRMLY BY HAND TO ENSURE CONTACT WITH SUBSOIL. WORK SIBED TOPSOIL OR SAND INTO MINOR CRACKS BETWEEN PIECES OF SOD.
 - SODDING OPERATIONS**
 - LAY SOD WITHIN 24 HOURS OF DELIVERY AT SITE. DO NOT PLANT DORMANT SOD OR ON FROZEN GROUND.
 - IF SOIL IS DRY, MOISTEN AREAS BEFORE SODDING. WATER THOROUGHLY AND ALLOW SURFACE MOISTURE TO DRY. DO NOT CREATE A MUDDY SOIL CONDITION.
 - REMOVE FIBER MESH USED BY SOD FARM TO TRANSPORT SOD ROLLS AS SOD IS BEING INSTALLED.
 - LAY SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. NO JOINT SHALL BE MORE THAN LAY SOD OVER MOISTENED SOIL. LIGHTLY RAKE THE SOIL AHEAD OF EACH SOD STRIP. BUTT ENDS AND SIDES OF SOD STRIPS. DO NOT OVERLAP. STAGGER STRIPS TO OPE-GET JOINTS IN ADJACENT COURSES. LAY SOD PARALLEL TO CONTOURS OF SLOPE. WORK FROM BOARDS TO AVOID DAMAGE TO SOD OR SOD. TAMP FIRMLY BY HAND TO ENSURE CONTACT WITH SUBSOIL. WORK SIBED TOPSOIL OR SAND INTO MINOR CRACKS BETWEEN PIECES OF SOD.
 - WATER SOD THOROUGHLY WITH A FINE SPRAY IMMEDIATELY AFTER PLANTING.
 - MAINTENANCE**
 - BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING.
 - MAINTAIN LAWNS FOR NOT LESS THAN A PERIOD OF AT LEAST 60 DAYS AFTER COMPLETION AND ACCEPTANCE OF SOD. INSPECTION TO DETERMINE ACCEPTANCE OF SODDED LAWNS WILL BE MADE BY PARKS STAFF AND SITES SOUTHWEST REPRESENTATIVE UPON CONTRACTOR'S REQUEST. PROVIDE NOTIFICATION AT LEAST 10 WORKING DAYS BEFORE REQUESTED INSPECTION DATE. AND LONGER AS REQUIRED TO ESTABLISH AN ACCEPTABLE LAWN.
 - SODDED LAWNS TO BE MAINTAINED NOT LESS THAN 60 DAYS AFTER COMPLETION AND ACCEPTANCE OF SODDING OPERATIONS.
 - MAINTENANCE TO INCLUDE:
 - WATER SOD THOROUGH EVERY 2 TO 3 DAYS MIN. AS REQUIRED TO ESTABLISH PROPER ROOTING. REPAIR, REWORK AND RESOD AREAS THAT HAVE WASHED OUT OR ERODED.
 - REPLACE DEAD OR UNDESIRABLE SOD SECTIONS WITH NEW SOD.
 - MOW LAWN AREAS WHEN THE GRASS IS OVER 2 INCHES HIGH FOR FIRST CUTTING. FERTILIZE LAWN WITH TOP DRESSING FERTILIZER AT 1 LB. PER 1,000 SQ.FT. OF NITROGEN. WATER THOROUGH.
 - ADDITIONAL LAWN MAINTENANCE CONSISTS OF WEEDING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REPAIRING AND REPAIRING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN FREE OF ERODED OR BARE AREAS.
 - CLEANUP AND PROTECTION**
 - DURING THE WORK, KEEP PAVEMENTS CLEAN AND WORK AREA IN AN ORDERLY CONDITION.
 - PROTECT WORK AND MATERIALS FROM DAMAGE DUE TO SODDING OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR OR REPLACE DAMAGED WORK AS DIRECTED.
 - INSPECTION AND ACCEPTANCE**
 - WHEN INSPECTED WORK DOES NOT COMPLY WITH REQUIREMENTS, REPLACE REJECTED WORK AND CONTINUE SPECIFIED MAINTENANCE UNTIL REINSPECTED BY THE LANDSCAPE DESIGNER AND CITY OF EL PASO PARKS AND RECREATION AND FOUND TO BE ACCEPTABLE. REMOVE REJECTED SOD AND MATERIALS PROMPTLY FROM PROJECT SITE.

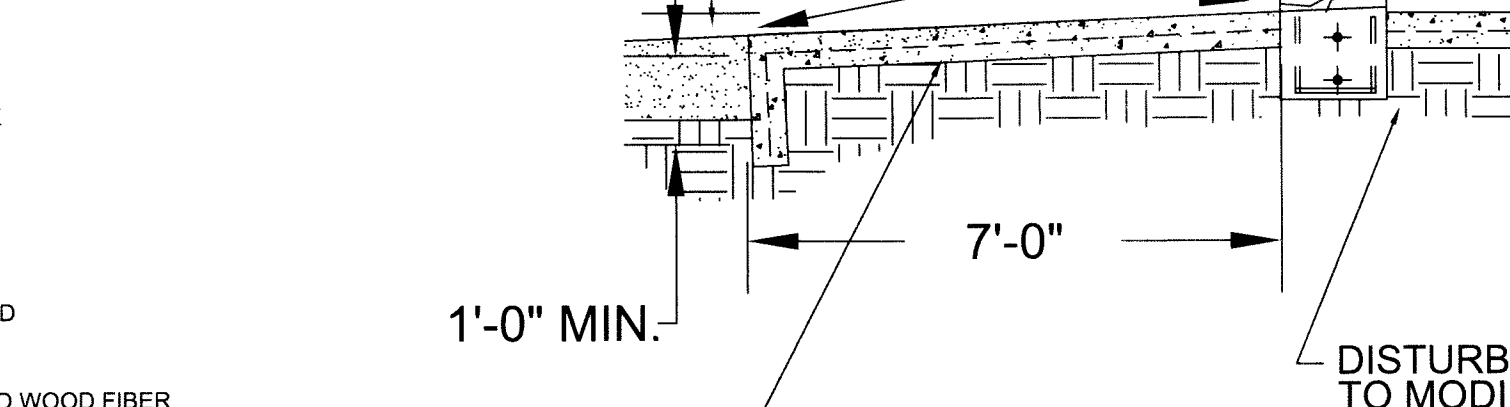


NOTE: REAR WALL SHALL BE COMBINATION WROUGHT IRON, AND ROCK WALL AS ABOVE.

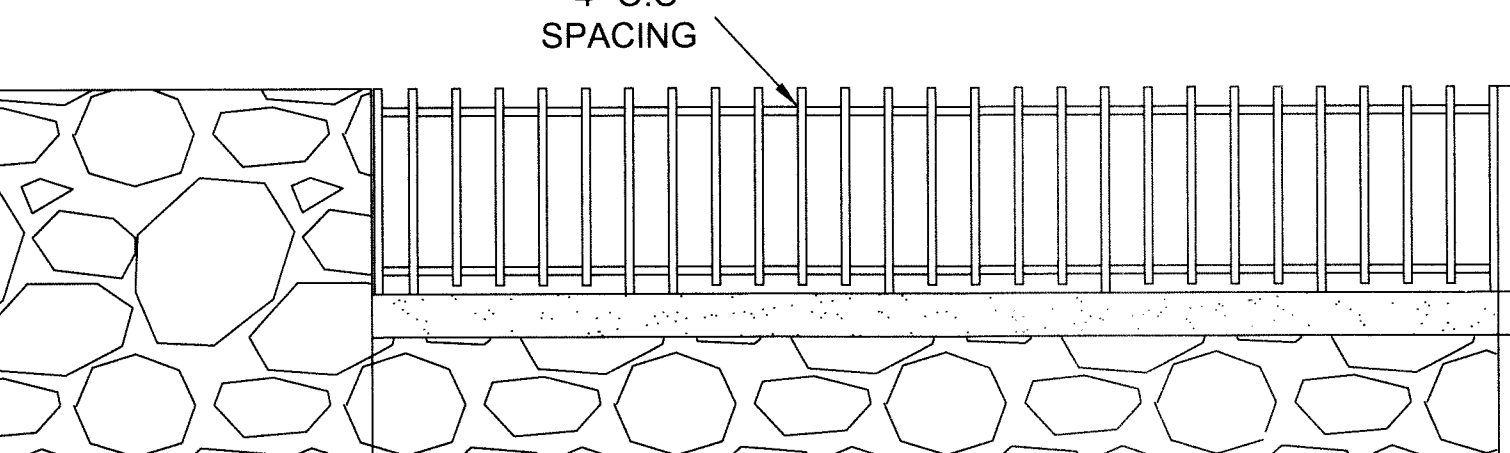
CORNER ROCK WALL SECTION



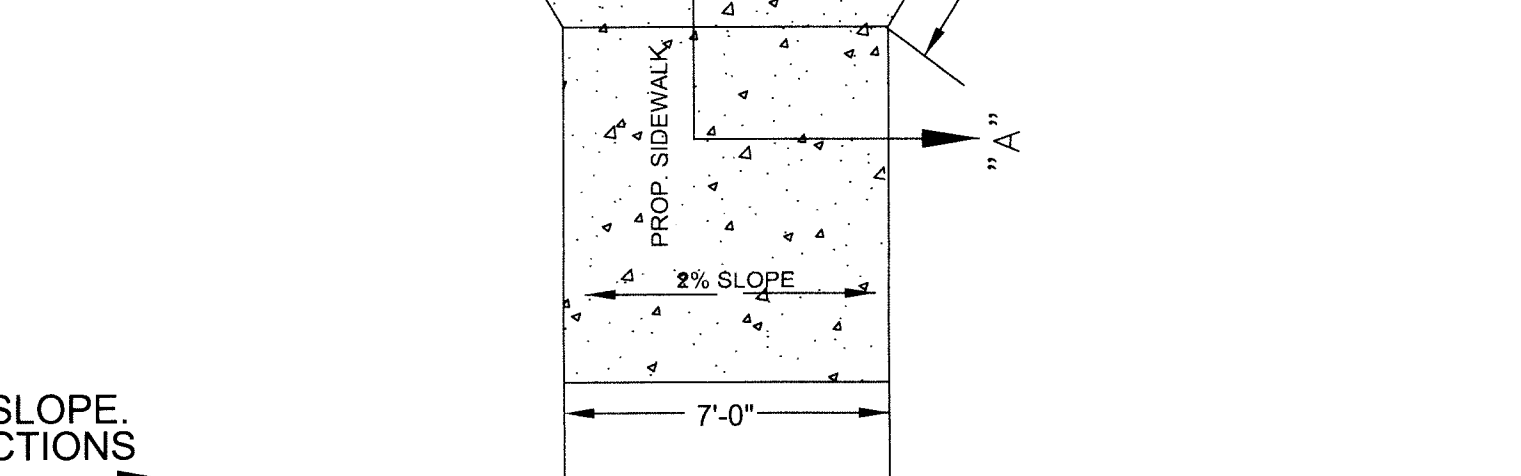
SECTION "A"- "A"



COMBINATION REAR WALL



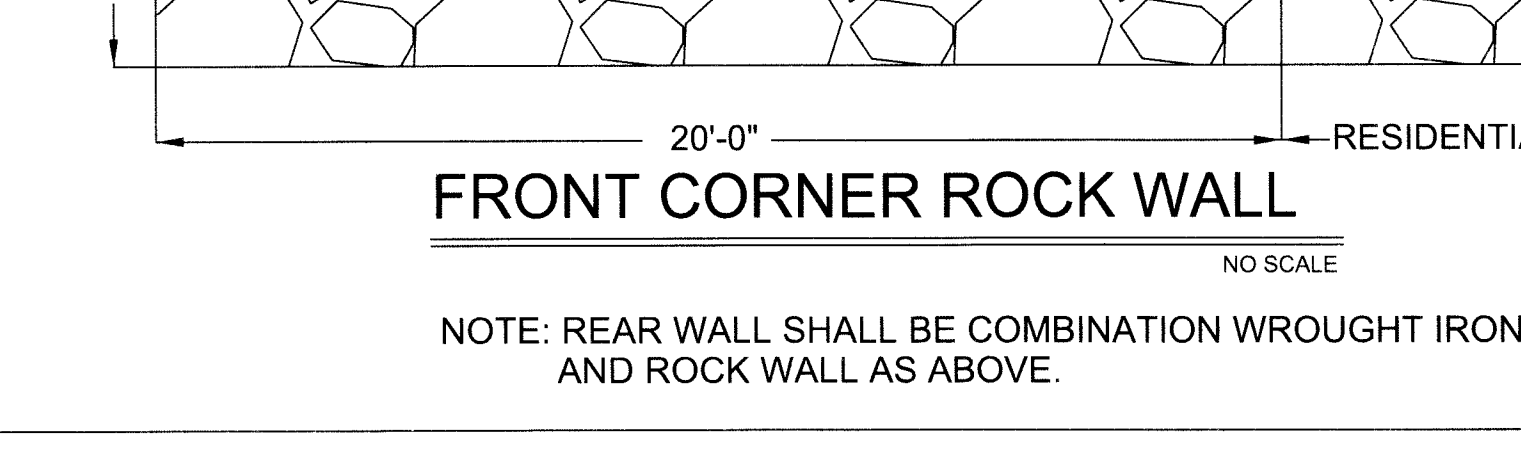
PLAYGROUND RAMP



SIDEWALK

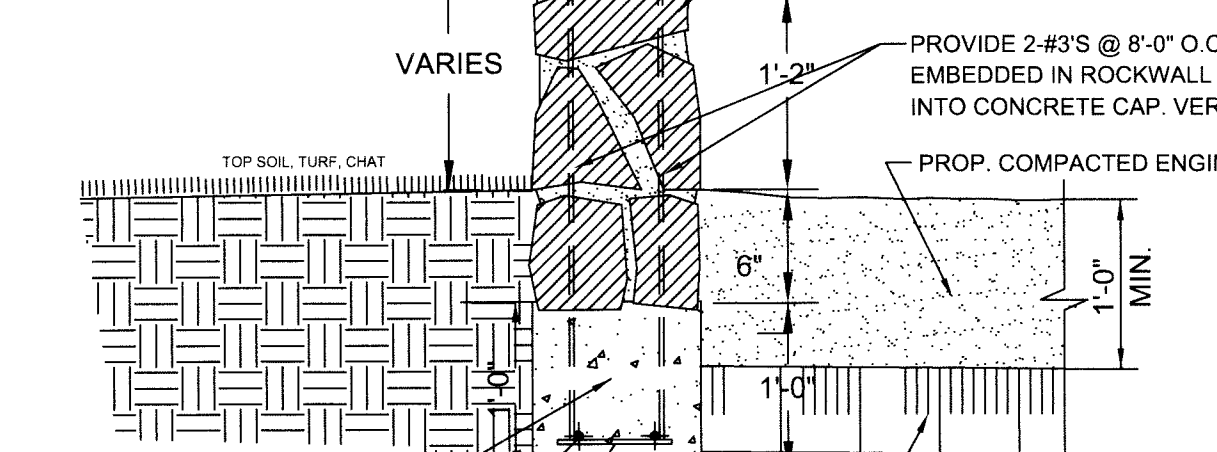
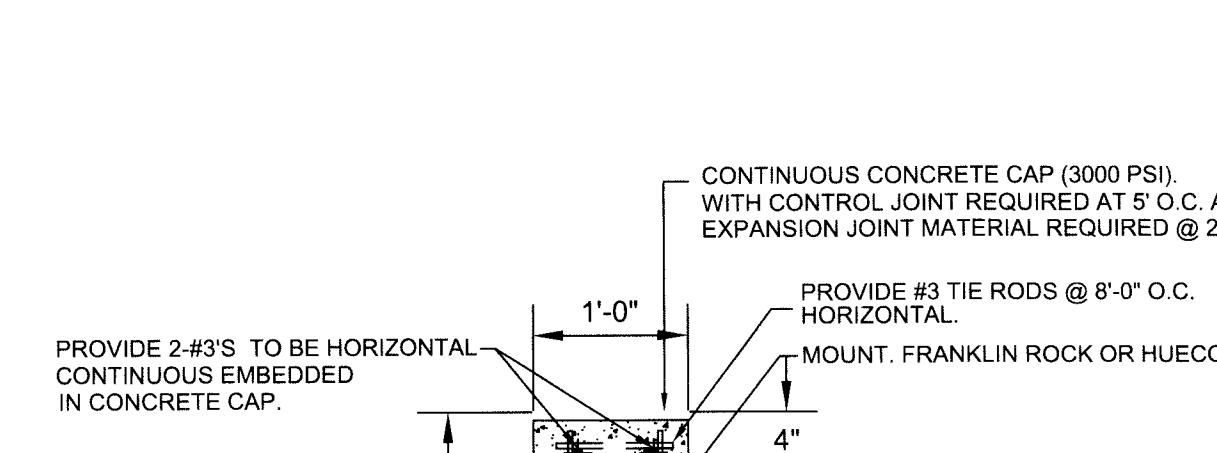


FRONT CORNER ROCK WALL



NOTE: REAR WALL SHALL BE COMBINATION WROUGHT IRON, AND ROCK WALL AS ABOVE.

ROCK WALL-SECTION RESIDENTIAL WALL



- NOTES:**
- STONE FOR ROCKWALL SHALL BE AS NEARLY UNIFORM IN SECTION AS IS PRACTICABLE. THE STONE SHALL BE DENSE AND RESISTANT TO AIR AND WATER.
 - MORTAR SHALL BE TYPE "M" 1800 P.S.I. AS PER ASTM C270-73. MORTAR SHALL CONSIST BY VOLUME OF: 1 PART PORTLAND CEMENT, 3 1/2 PARTS OF CLEAN, HARD, DURABLE SAND AND 1/4 PART (MORTAR) LIME THOROUGHLY MIXED WITH WATER.
 - ROCKWALL MORTAR JOINTS SHALL NOT EXCEED 3/4" TO 1 1/4".
 - STONE SHALL BE CLEANED, FREE OF DIRT PRIOR TO INSTALLATION.
 - NO RIVER ROCK SHALL BE ALLOWED FOR ROCKWALLS.

PLAYGROUND ROCK WALL

NO SCALE

BY					
REVISION					
DATE					
NO.					
WARNING!					
CONTRACTOR SHALL					
FIELD LOCATE ALL EXISTING					
UNDERGROUND IMPROVEMENTS					
IN PROJECT AREA					
SCALE	HOR:	NOT TO SCALE	VER:	N/A	
	DATE	MAY 23, 2013	DESIGN BY	L. WRIGHT	
	DRAWN BY	L. CERNA	CHECKED BY	L. WRIGHT	
	APP'D BY	L. WRIGHT			
PROJECT NAME RIO DEL NORTE PARK 6700 RIO HACIENDA CIRCLE, EL PASO COUNTY, TEXAS. LOT 8, BLOCK 5 HACIENDA DEL RIO UNIT 1 2.28 ACRES, TOTAL OF 99.318 SQ.FT.					
LANDSCAPE ARCHITECTURAL SERVICES NEW MEXICO LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT 2807 TEXAS AVENUE SUITE A EL PASO, TX 79901 PHONE: (979) 742-7178 EMAIL: lwright@landscapeservices.com					
CITY OF EL PASO TEXAS Final Approval					
DRAWING COORDINATION LANDSCAPE ARCHITECTURAL, IRRIGATION, CIVIL, AND ELECTRICAL DRAWINGS ARE INTERRELATED. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL REVIEW AND COORDINATE THE ENTIRE SET OF DRAWINGS AND PROJECT MANUAL.					
SHEET TITLE L-8.0 SHEET OF					

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