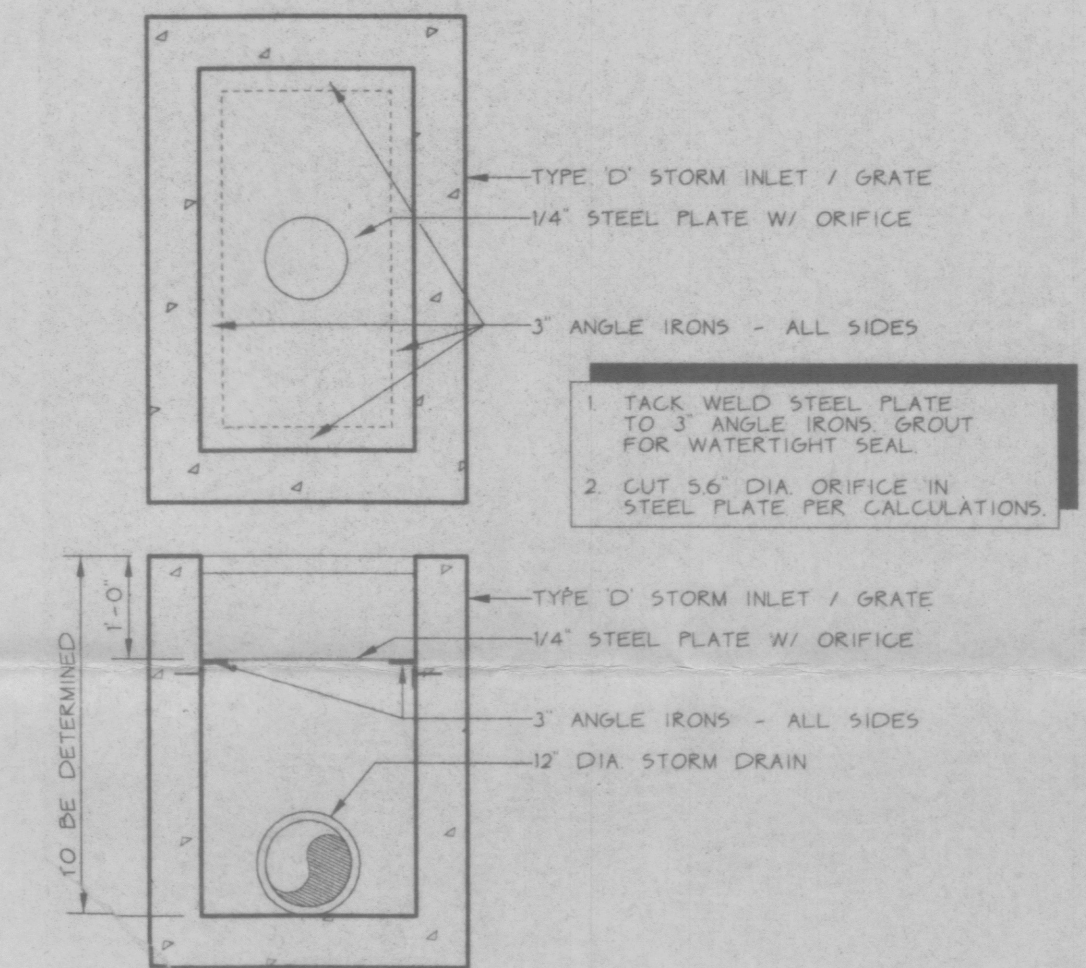


KEYED NOTES:

- 1 NEW DRIVE ACCESS TO BE CONSTRUCTED CONCURRENTLY WITH MONTANO ROAD NW IMPROVEMENTS.
- 2 FUTURE MONTANO IMPROVEMENTS SHOWN TAKEN FROM PRELIMINARY C.O.A. PROJECT NO. 3255 - MONTANO PHASE 1B BY WILSON AND COMPANY.
- 3 PROPOSED SAND PLAYGROUND THIS AREA.
- 4 UNCONCENTRATED ROOF FLOWS
- 5 CONCENTRATED ROOF FLOWS
- 6 CONSTRUCT 1' WIDE SIDEWALK CULVERT 12 THIS AREAL GRADE LANDSCAPED AREA TO DRAIN TO CULVERTS.
- 7 FUTURE STORM SEWER SYSTEM PER MONTANO PRELIMINARY CONSTRUCTION PLANS BY WILSON ENGINEERING.
- 8 PROVIDE 1' WIDE OPENING IN CURB TO ALLOW FLOWS TO PASS.
- 9 CONSTRUCT APPX. 70 LF 2' WIDE CONCRETE VALLEY GUTTER TO CARRY FLOWS AT SLOPE = 0.0050/
- 10 WATER HARVESTING AREA SEE LANDSCAPE PLAN FOR ADDITIONAL INFORMATION.
- 11 FINISH GRADE IS APPROXIMATELY EQUAL TO FINISH FLOOR THIS AREA.
- 12 EXISTING ASPHALT PAVING TO REMAIN.
- 13 PROPOSED BRICK PAVERS ON SAND INO GROUTI THIS AREA. PROVIDE SWALE TO DRAIN AS SHOWN.
- 14 FUTURE CONNECTION FROM POND TO PROPOSED MONTANO STORM DRAIN TO BE CONSTRUCTED CONCURRENTLY WITH MONTANO PHASE 1B. (SEE DETAIL OF INLET THIS SHEET)
- 15 PROVIDE A MIN. FOUR PERCENT GRADIENT WITHIN AT LEAST THE FIRST TEN FEET AWAY FROM STRUCTURE THIS AREA PROVIDE POSITIVE DRAINAGE TO REMOVE FLOWS FROM THE AREA.

NOTE: SEE ARCHITECTURAL PLANS FOR EROSION PROTECTION DETAILS FOR BOTH CONCENTRATED AND UNCONCENTRATED ROOF FLOWS.
SEE LANDSCAPE PLAN FOR EROSION PROTECTION IN LANDSCAPED AREA.



CONCEPTUAL STORM DRAIN INLET

SCOPE

The proposed improvements include approximately 6,800 SF (footprints) church facility with all the necessary site improvements associated with vehicle access, parking and landscaping.

The site is bounded on the south by Montano Road, NW, on the north and west by existing single family residences and on the east by existing church facilities. The site has no apparent slope.

The intent of this plan is to show:

- Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to designated discharge points.
- The extent of proposed site improvements, including buildings, walks and pavement.
- The flow rate/volume of rainfall runoff across or around these improvements and methods of handling these flows to meet City of Albuquerque requirements for drainage management.
- The relationship of on-site improvements with existing neighboring property to insure an orderly transition between proposed and surrounding grades.

DRAINAGE PLAN CONCEPT: The proposed site is split into two basins. Basin 1 will be ponded until the Montano Phase 1B Storm Drain is constructed (COA Project No. 3255 by Wilson and Company). At that time, a storm drain inlet will be installed to carry the Basin 1 flows to the new storm drain. Basin 2 remains unchanged. Flows will continue to historically discharge to Montano Road.

GENERAL NOTES

- LEGAL:** St. Michael and All Angels Episcopal Church, Albuquerque, New Mexico.
- SURVEYOR:** Forstbauer Surveying Co. - 268-2112
- B.M.:** City of Albuquerque 13-F14, an aluminum cap located in the median of Montano Road NW, 22 feet west of the centerline of Guadalupe Trail NW - elevation = 4974.63 (M.S.L.D.)
- FLOOD HAZARD:** Per FEMA Boundary Map #15, the site is not located in a flood zone.
- OFF-SITE DRAINAGE:** No off-site drainage affects this property.
- EROSION CONTROL:** The contractor is responsible for retaining on-site all sediment generated during construction by means of temporary earth berms or silt fences at the low points on the west property line.

FUTURE STORM DRAIN INLET

Future discharge to Montano Road NW and the future storm drain will be limited to the Historical Discharge of 5.7 cfs (see historical calculations above). The entirety of Basin 2 (2.4 cfs) will continue to surface drain leaving a maximum of 3.3 cfs to be discharged from Basin 1. Following are calculations sizing the orifice required to meet this discharge rate:

Based on the Orifice Equation $Q = C^*A^*(2g^*h)^{1/2}$

Where

Q	=	3.3	g	=	32.2
C	=	0.6	h	=	1
A	=	0.7 sf			

The required Area is

5.6" dia. orifice to achieve the req'd discharge rate.
see detail this sheet.

CALCULATIONS:

Calculations are based on the Drainage Design Criteria for City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE

AREA OF SITE:		72093	SF	=	1.66	Ac.
HISTORIC FLOWS:		DEVELOPED FLOWS:		EXCESS PRECIPITATION:		
On-Site Historic Land Condition		On-Site Developed Land Condition		Precip. Zone 1		
Area a =	0	SF	Area a =	0	SF	Ea = 0.44
Area b =	775	SF	Area b =	12008	SF	Eb = 0.67
Area c =	43399	SF	Area c =	8500	SF	Ec = 0.99
Area d =	27919	SF	Area d =	51585	SF	Ed = 1.97
Total Area =	72093	SF	Total Area =	72093	SF	

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

Weighted E = $EaAa + EbAb + EcAc + EdAd$

Historic E = 1.37 in. Developed E = 1.64 in.

On-Site Volume of Runoff: $V360 = EA / 12$

Historic V360 = 8207 CF Developed V360 = 9840 CF

On-Site Peak Discharge Rate: $Qp = QpaAa + QpbAb + QpcAc + QpdAd / 43,560$

For Precipitation Zone 1

Qpa = 1.29 Qpb = 2.03 Qpc = 2.87 Qpd = 4.37

Historic Qp = 5.7 CFS Developed Qp = 6.3 CFS

Basin 1

Area of Basin flows = 52242 SF = 1.2 Ac. Precip. Zone 1

The following calculations are based on Treatment areas as shown in table to the right

Off-Site Weighted Excess Precipitation (see formula above)

Weighted E = 1.71 in.

On-Site Volume of Runoff (see formula above)

V360 = 7444 CF

Off-Site Peak Discharge Rate: (see formula above)

Qp = 4.7 cfs

Basin 1 - POND SIZE: The proposed pond is sized as follows:

POND VOLUME CALC AREA (SF) VOLUME (CF)

Area of contour 4971.5 = 51 4972.0 = 321 4973.0 = 8234 4973.5 = 15978

Total Volume Provided: 10424

**Pond Elevation = 4973.3 for 100-year storm

Note: This pond is temporary until the construction of Montano Phase 1B. At that time, the proposed storm drain inlet located within the ponding area will be installed. Landscaped area contains nuisance flows of 150 cfs before backing up into the parking area.

Basin 2

Area of Basin flows = 25595 SF = 0.6 Ac. Precip. Zone 1

The following calculations are based on Treatment areas as shown in table to the right

Off-Site Weighted Excess Precipitation (see formula above)

Weighted E = 1.78 in.

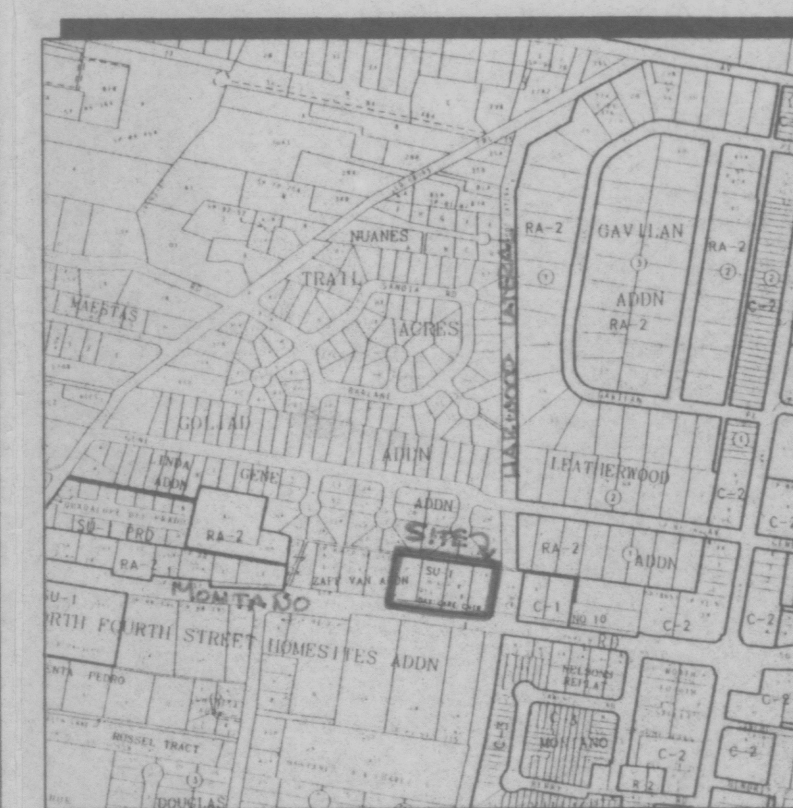
On-Site Volume of Runoff (see formula above)

V360 = 3786 CF

Off-Site Peak Discharge Rate: (see formula above)

Qp = 2.4 cfs

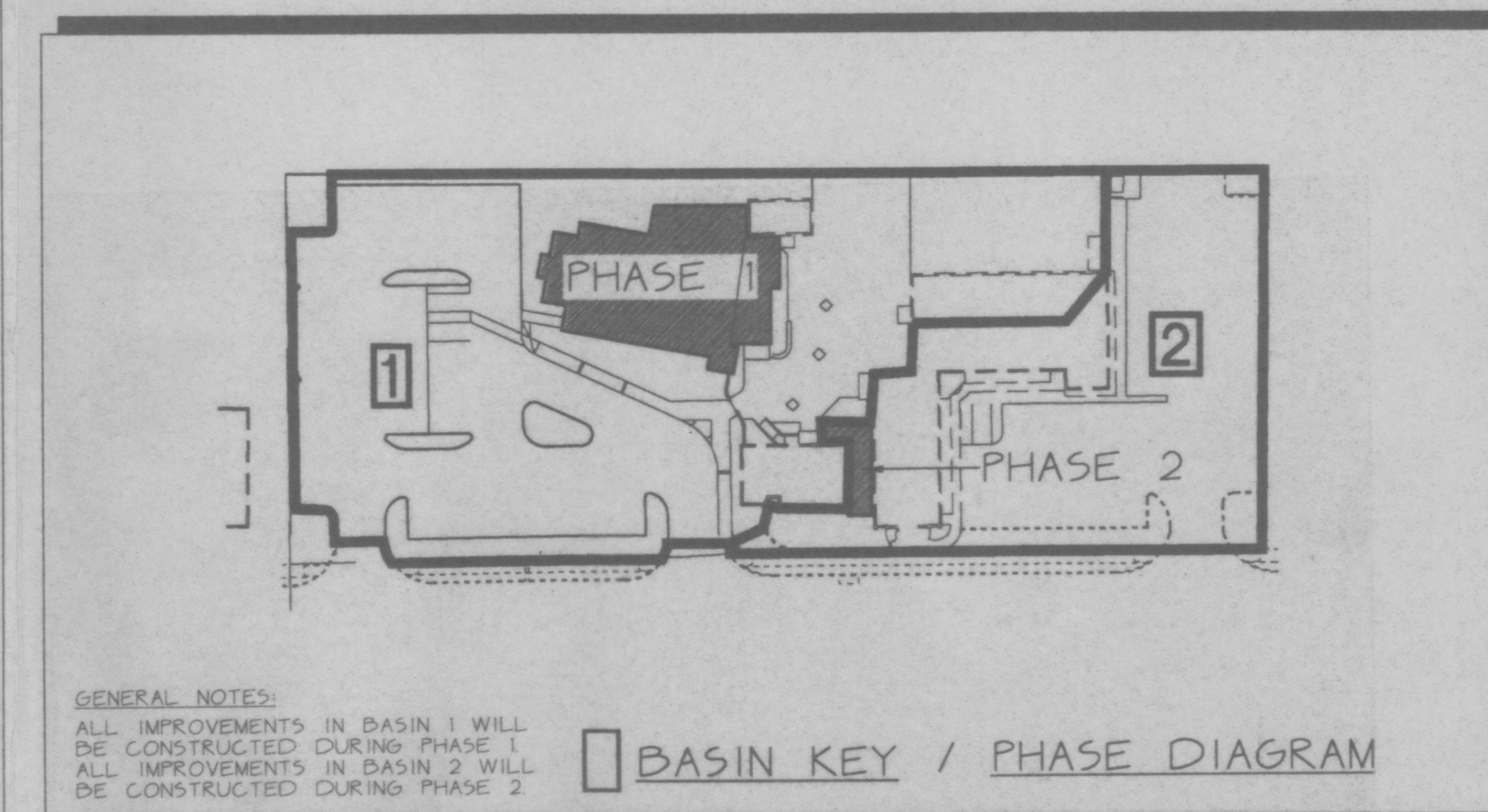
Note: This Basin has historically discharged to Montano Blvd. and will continue to do so.



VICINITY MAP F-14



FEMA MAP #15



GENERAL NOTES:

- ALL IMPROVEMENTS IN BASIN 1 WILL BE CONSTRUCTED DURING PHASE 1.
- ALL IMPROVEMENTS IN BASIN 2 WILL BE CONSTRUCTED DURING PHASE 2.

BASIN KEY / PHASE DIAGRAM

CIVIL ENGINEERING: C.L. WEISS ENGINEERING, INC. (505) 281-1800

RD Habiger & Associates Inc.

417 Second St. SW

Albuquerque, New Mexico 87102

(505) 242-8070

GRADING & DRAINAGE PLAN

ST. MICHAEL AND ALL ANGELS

EPISCOPAL CHURCH

601 MONTANO ROAD N.W.

ALBUQUERQUE, NEW MEXICO 87107

PROJECT#:

519

DRAWN BY:

BJB

CHECKED BY:

CLW

DATE:

4-24-96

REVISIONS

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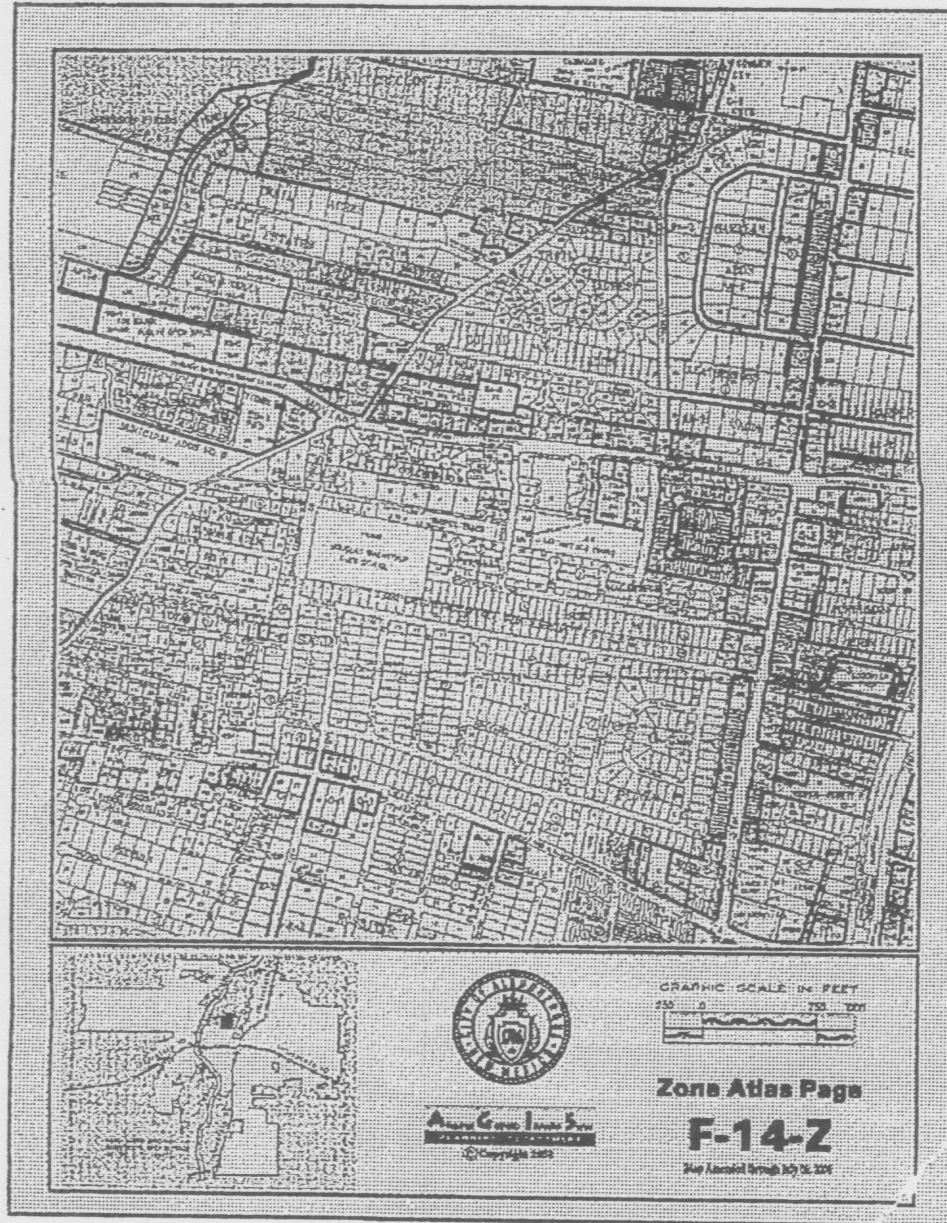
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SITE INFORMATION

PARKING REQUIRED
VEHICLE PARKING
270 SEATS / 4 =
TRANSIT REDUCTION =
TOTAL REQUIRED =

68 SPACES REQUIRED
7 SPACES
61 SPACES

MOTORCYCLE =
BICYCLE = 68 / 20 =

3 REQUIRED
4 REQUIRED

PARKING PROVIDED
STANDARD =
COMPACT =
ACCESSIBLE =
TOTAL =

50
10
12
72 SPACES (> 61, OK)

MOTORCYCLE =
BICYCLE =

4 PROVIDED (>3, OK)
4 PROVIDED (=4, OK)

SITE INFORMATION
ZONING: SU-1 FOR CHURCH

LOT 9-A: 1.5715 ACRES
LOT 10-A: 0.3992 ACRES
TOTAL SITE AREA: 85843.692 (1.9707 ACRES)

GROSS SF: 24,728 SQFT (ALL BLDGS. INCLUDING FUTURE PHASE)
FAR: 24,728 SQFT / 85843.692 SQFT = .288

LEGEND

- POLE-MOUNTED LIGHT FIXTURE, RE. A191
- EXISTING FIRE HYDRANT
- LB - EXISTING LIGHT BOLLARD
- LP - EXISTING POLE - MOUNTED LIGHT FIXTURE

LEGAL DESCRIPTION

PARCEL 1: LOT NUMBERED FIVE-A (5-A) OF THE ZAPF-VAN ADDITION NO. 10, ALBUQUERQUE, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON NOVEMBER 1, 1988, IN PLAT BOOK C37, PAGE 158.

PARCEL 2: LOT NUMBERED NINE-A (9-A) OF THE ZAPF-VAN ADDITION NO. 10, ALBUQUERQUE, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON AUGUST 6, 1996, IN PLAT BOOK 96C, PAGE 347.

PARCEL 3: LOT NUMBERED TEN-A (10-A) OF THE ZAPF-VAN ADDITION NO. 10, ALBUQUERQUE, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NM, ON SEPT. 6, 1988, IN PLAT BOOK C37, PAGE 67.

KEYED NOTES

- WOOD FENCE TO MATCH EXISTING ADJACENT
- LANDSCAPE AREA.
- 6" CONCRETE CURB.
- CONCRETE SIDE WALK.
- NEW PAINTED STRIPPING/SYMBOLS/HATCHING AS SHOWN.
- RELOCATED EXISTING METAL GATE (TO REMAIN UNLOCKED)
- EDGE OF ASPHALT PAVING
- EXISTING REFUSE ENCLOSURE TO REMAIN.
- NEW CONCRETE CURB AND GUTTER TO COA STANDARDS.
- RAISE EXISTING WATER METER AS REQUIRED
- BENCH 8'-0" TYP. (SEATING FOR 4)
- NEW ASPHALT PAVING OVER BASECOURSE AS RECOMMENDED BY GEOTECH REPORT.
- RELOCATE EXISTING CURB CUT
- POLE MOUNTED SIGNAGE, TYPE A. RE. D5/A091
- CONCRETE WHEEL STOP
- EXISTING SIDEWALK TO REMAIN.
- NEW CMU REFUSE ENCLOSURE COA STANDARDS, RE. A091
- 8" COMMON FACE CMU WALL, (2) COAT STUCCO BOTH SIDES, 3'-4" HIGH
- NOT USED
- EXISTING ASPHALT PAVING TO REMAIN.
- PAINT ASPHALT/CURB WITH "FIRE LANE NO PARKING" PER COA FIRE MARSHAL STANDARDS
- EXISTING LANDSCAPE AREA TO REMAIN.
- EXISTING FENCE TO REMAIN.
- EXISTING BRICK PAVEMENT TO REMAIN.
- ACCESSIBLE RAMP, RE. A091
- EXISTING CONCRETE RAMP TO REMAIN, RE. A091
- EXISTING CURB TO REMAIN.
- EXISTING DRIVE TO BE VACATED
- NOT USED
- VALLEY GUTTER, RE: CIVIL.
- DRAINAGE SWALE.
- NEW BIKE RACK FOR 4 BICYCLES.
- POLE MOUNTED SIGNAGE, TYPE B. RE: D4/A091
- TRANSFORMER WITH CONCRETE PAD
- EXISTING MONUMENT SIGN TO REMAIN.
- NOT USED
- LINE OF PHASE 2.
- COMPACTED GRAVEL DRIVE FOR FIRE DEPARTMENT ACCESS ONLY, COORDINATE WITH FIRE MARSHAL FOR LOAD CAPACITY REQUIREMENTS
- NOT USED
- NOT USED
- RELOCATED DRYWELL
- EXISTING GAS METER
- EXISTING WATER METER
- ELECTRIC METER

APPROVALS

PROJECT NUMBER: 1007922

APPLICATION NUMBER:

Is an Infrastructure List Required? () Yes () No If yes, then a set of approved DRC plans with a work order is required for any construction within Public Right-of-Way or for construction of public improvements.

DRB SITE DEVELOPMENT PLAN APPROVAL:

TRAFFIC ENGINEER, TRANSPORTATION DIVISION
DATE 02-11-10

UTILITIES DIVISION
DATE 1-27-10

CHRISTINA SANDORAL
PARKS AND RECREATION DEPARTMENT
DATE 1/27/10

BRADLEY D. BINGHAM
CITY ENGINEER
DATE 1/27/10

SOLID WASTE MANAGEMENT
DATE 1-15-10

DRB CHAIRPERSON, PLANNING DEPARTMENT
DATE 02-18-10

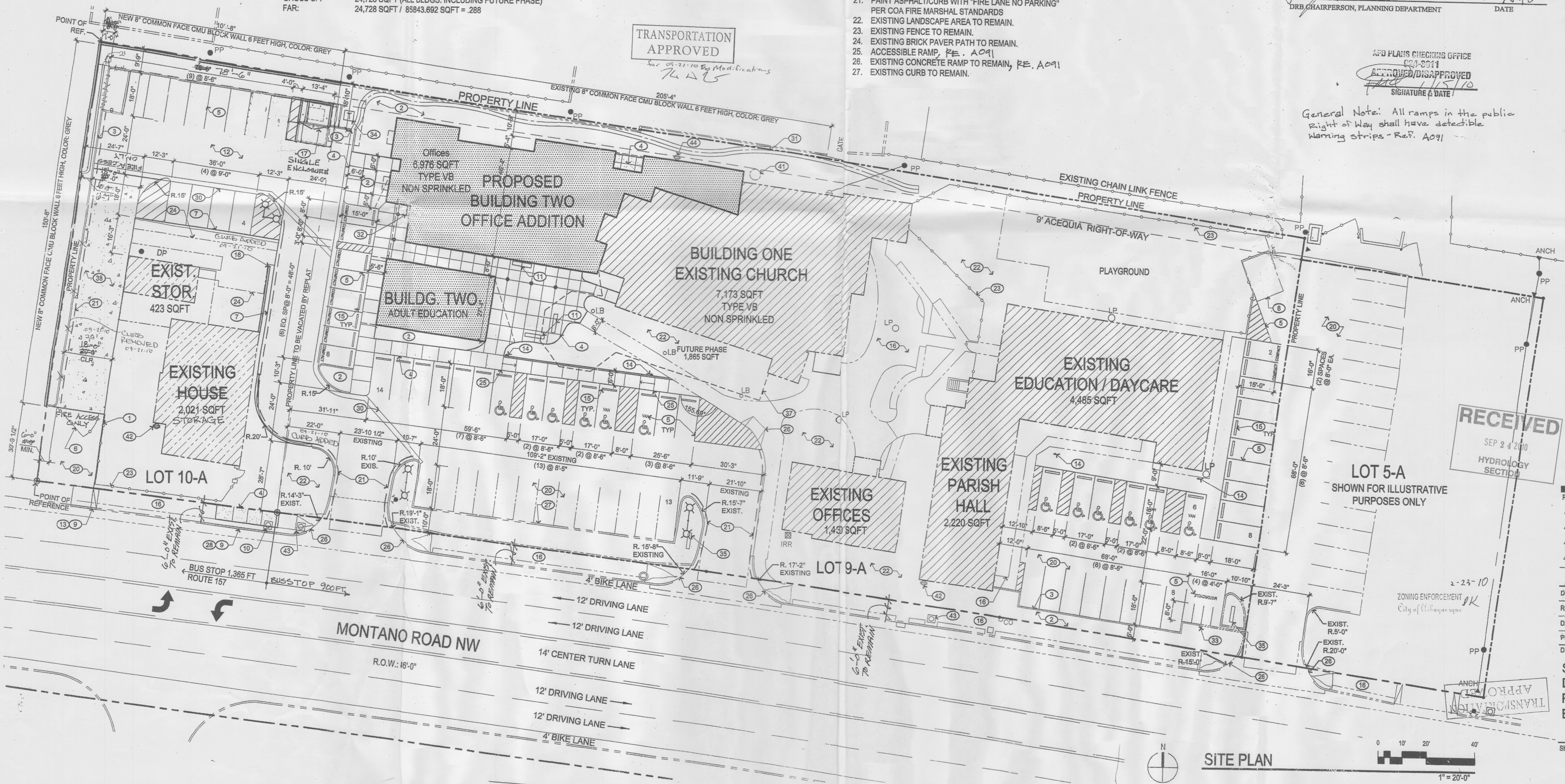
AFD PLANS CHECKING OFFICE

2-2-10

APPROVED/DISAPPROVED

SIGNATURE & DATE

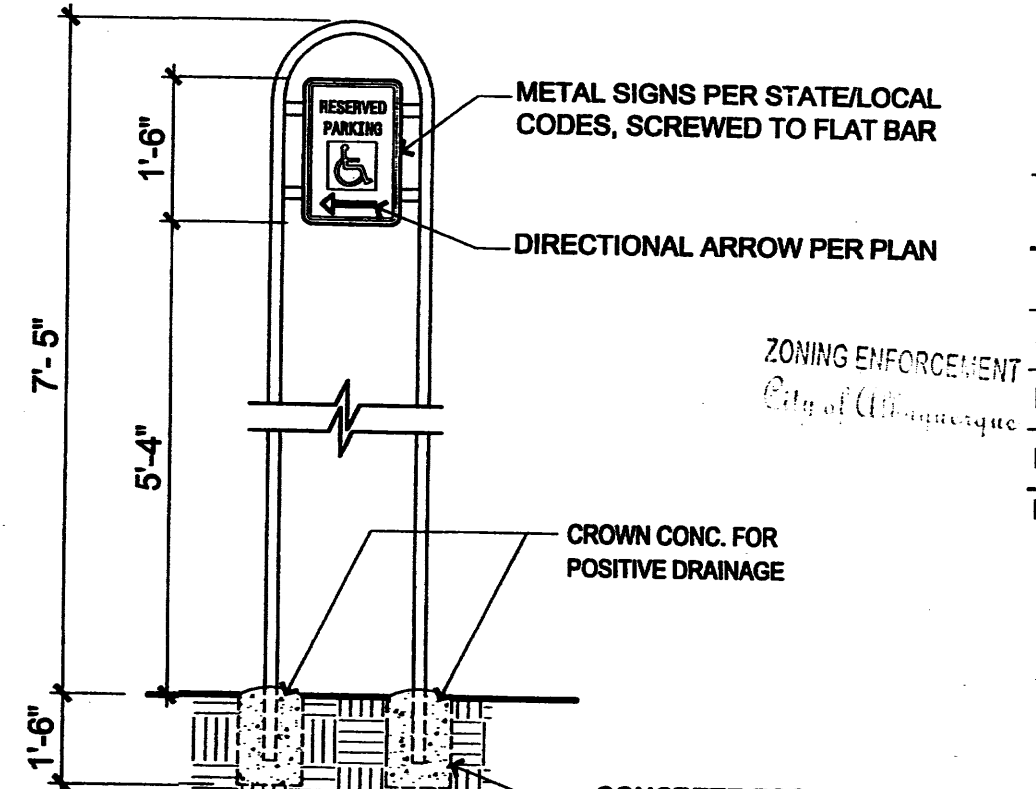
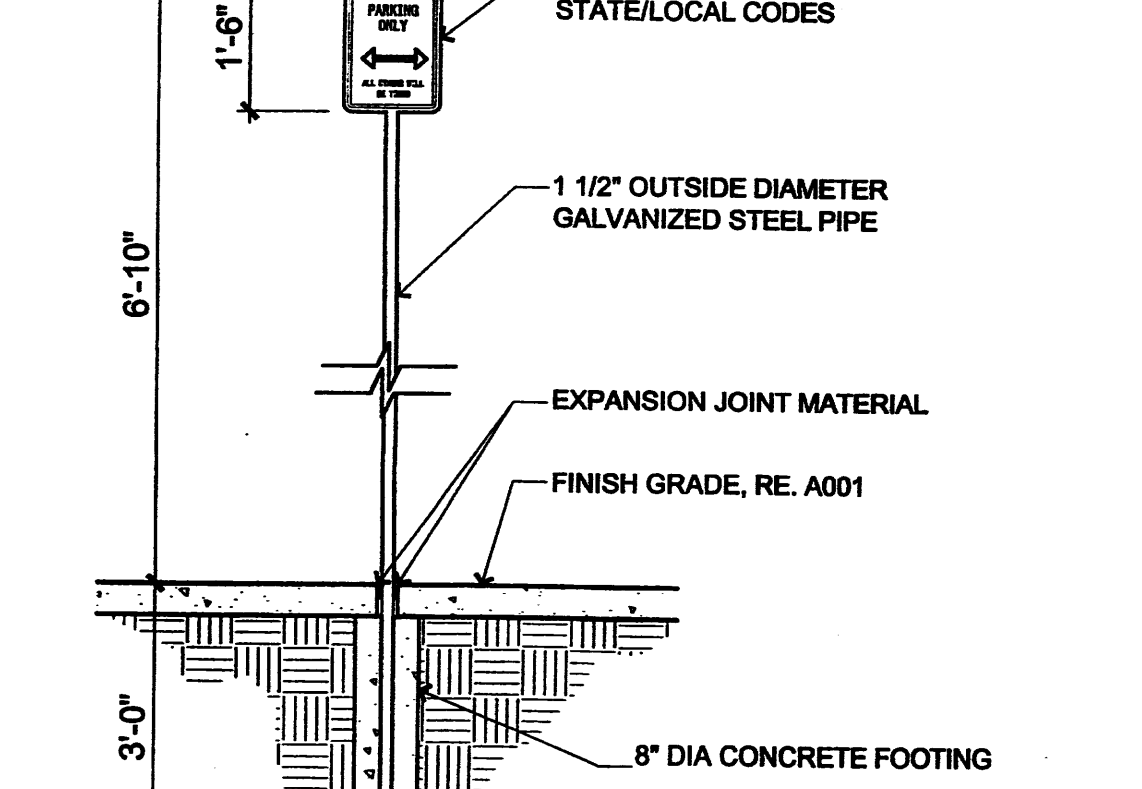
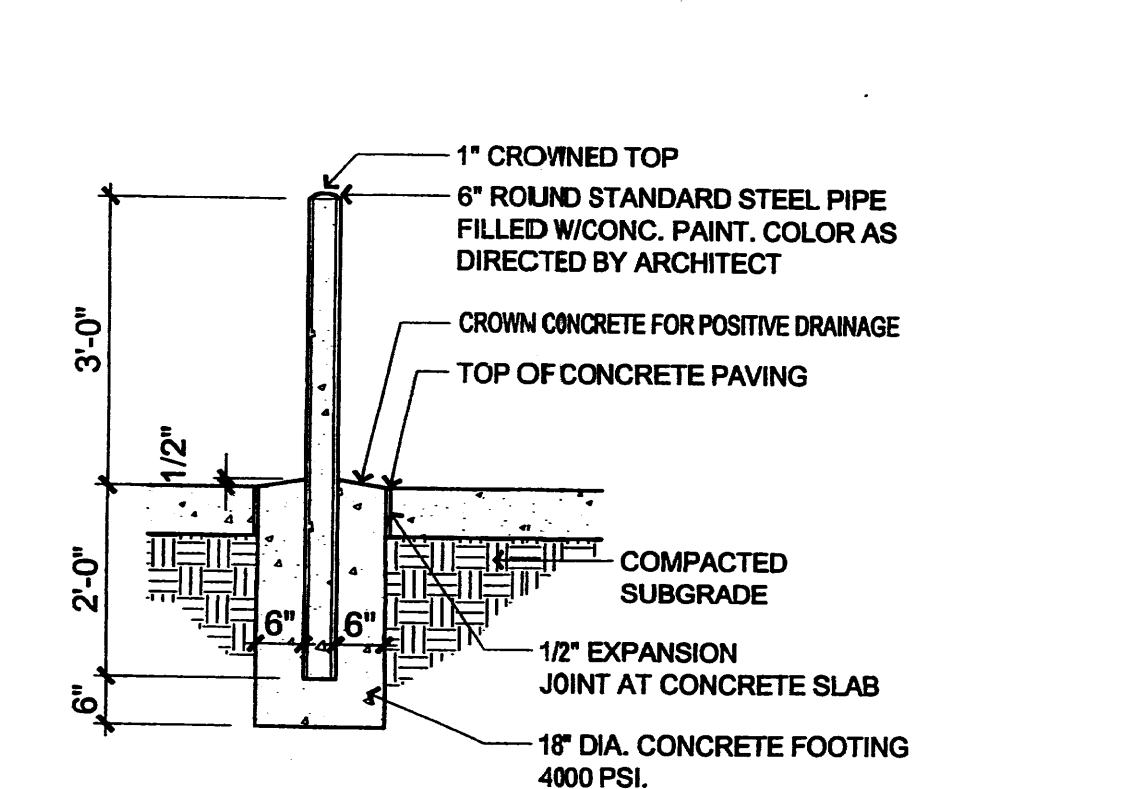
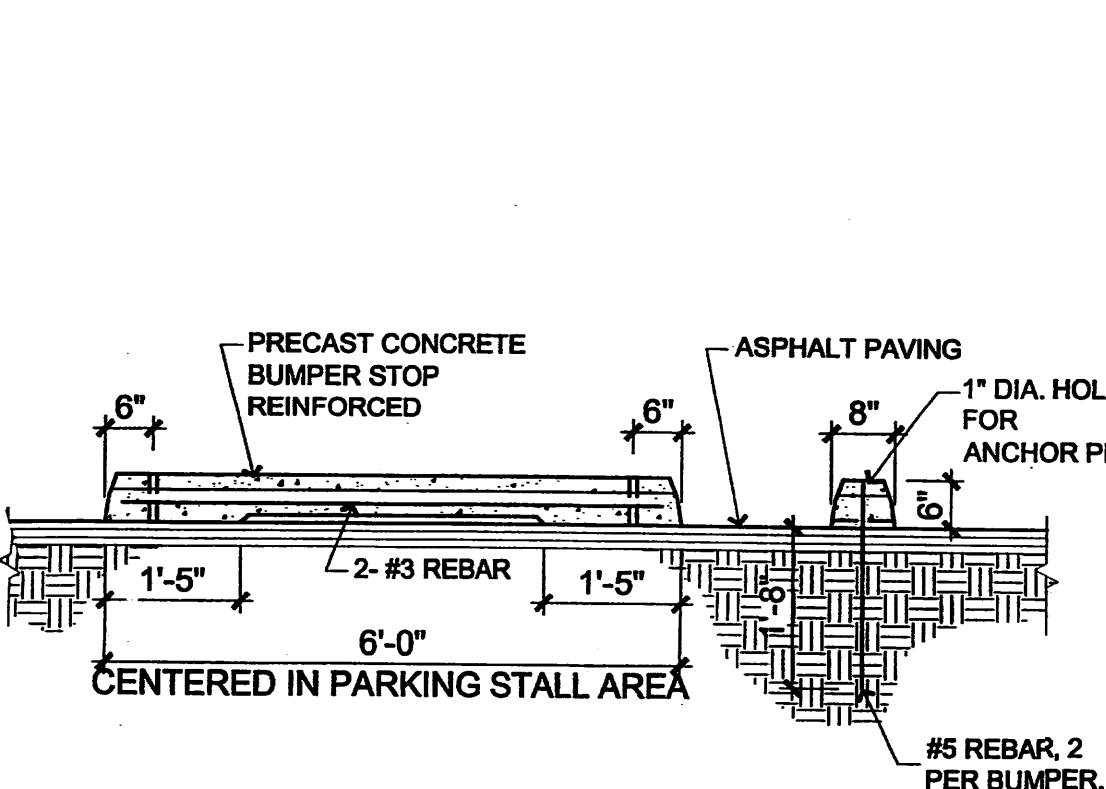
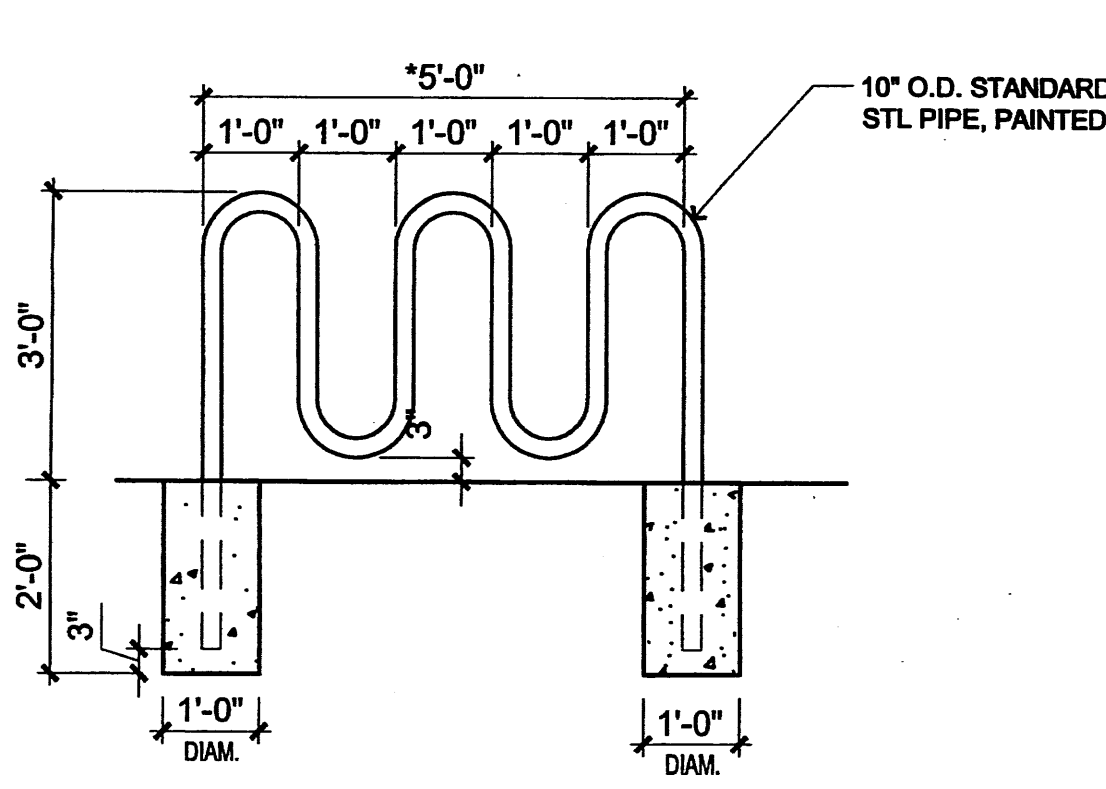
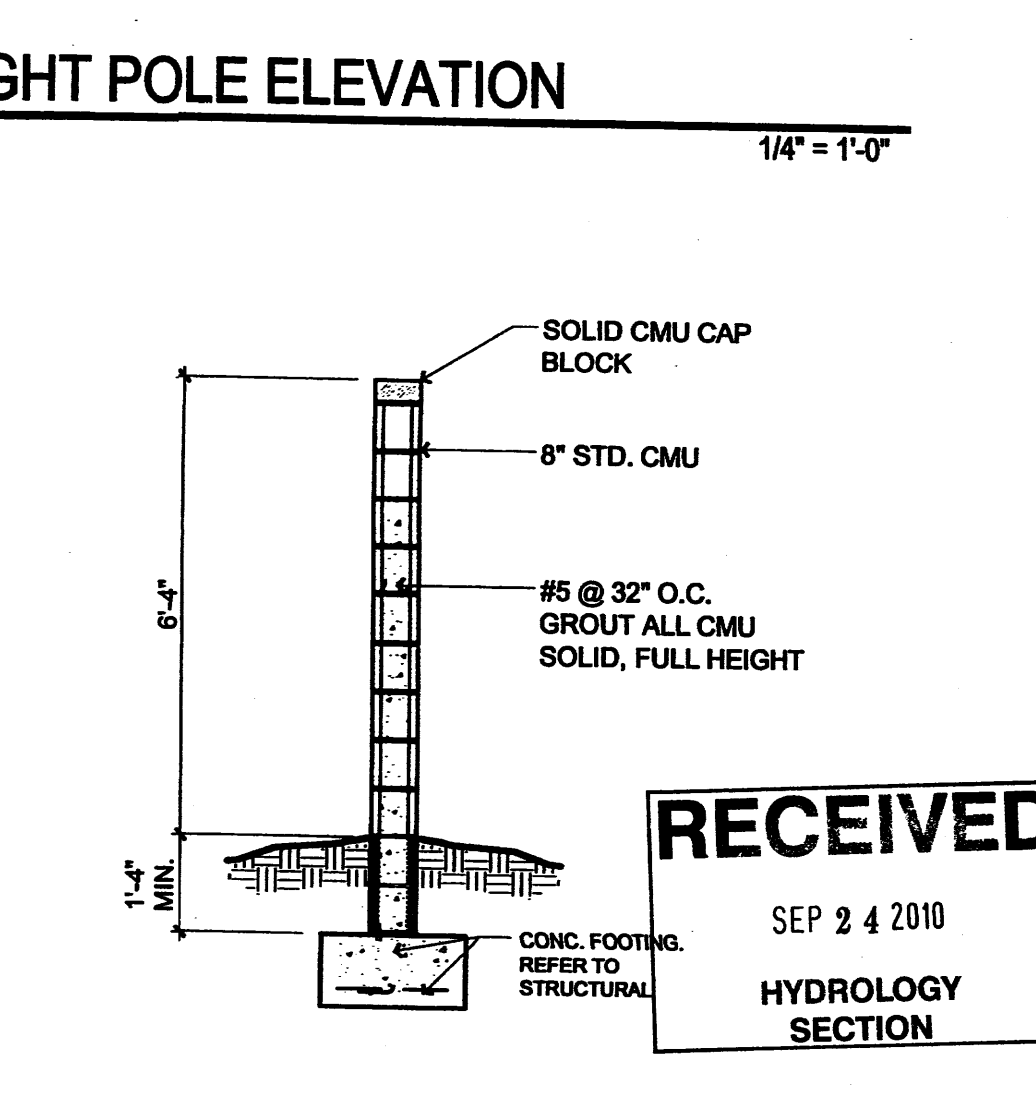
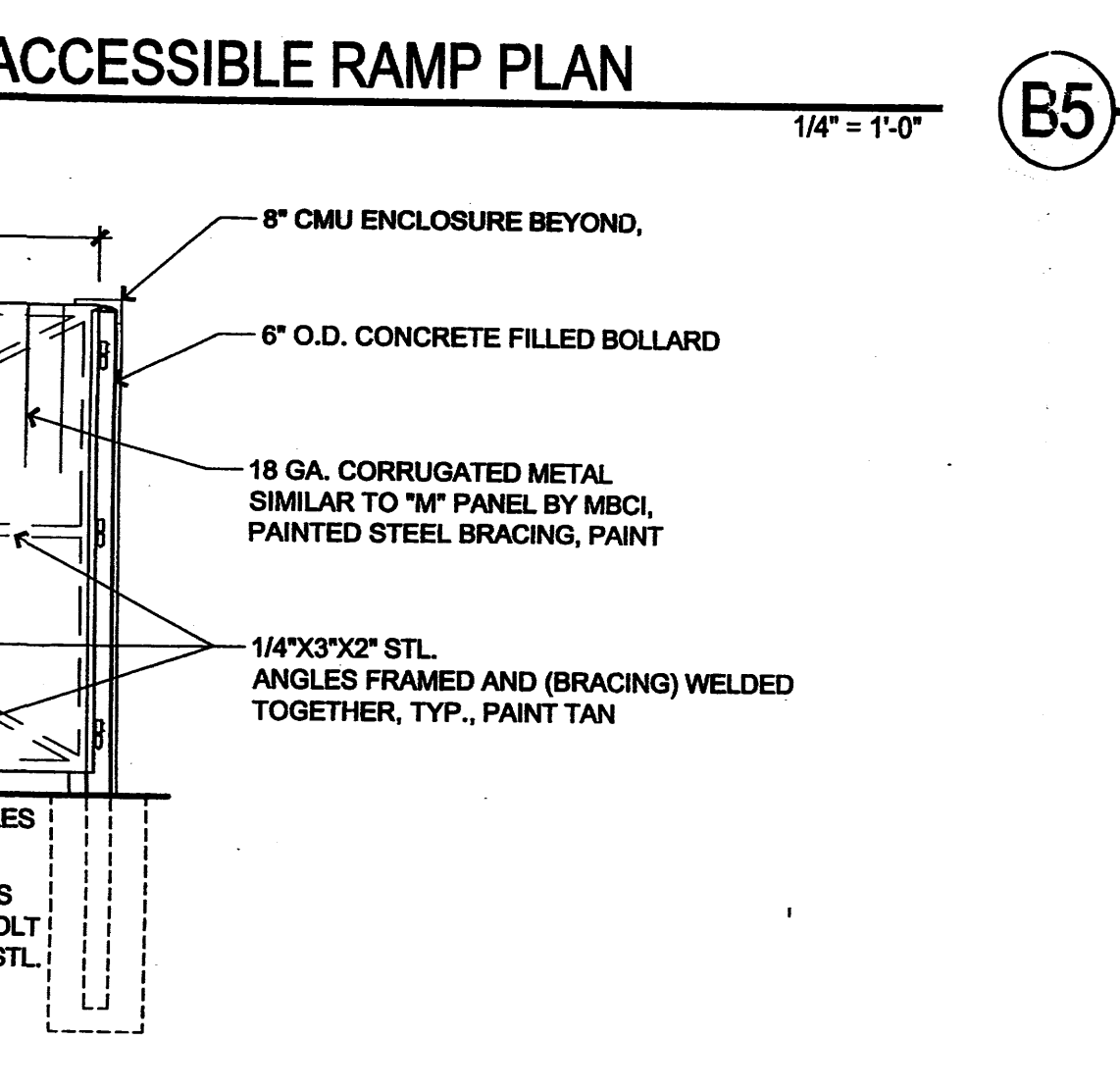
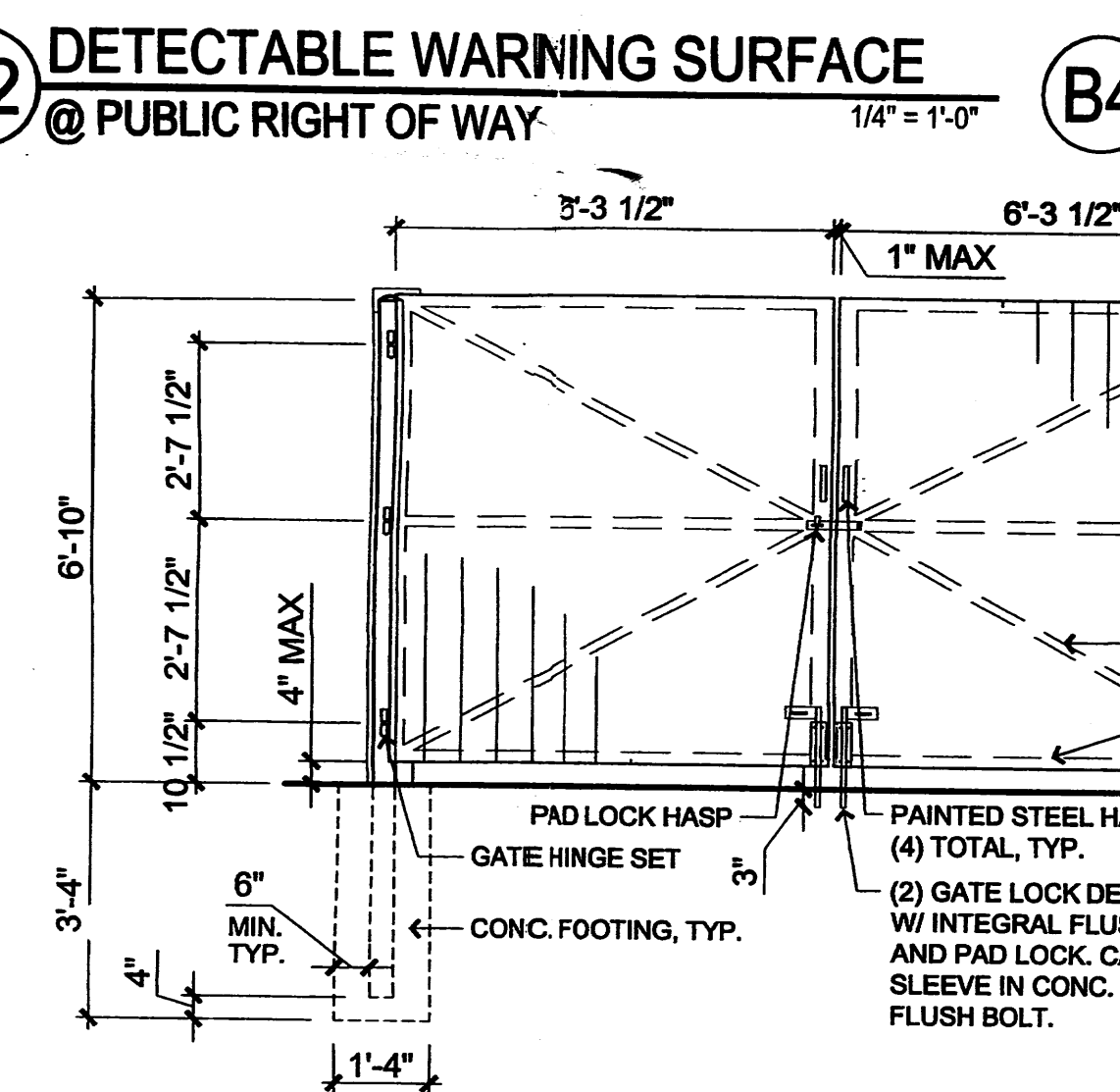
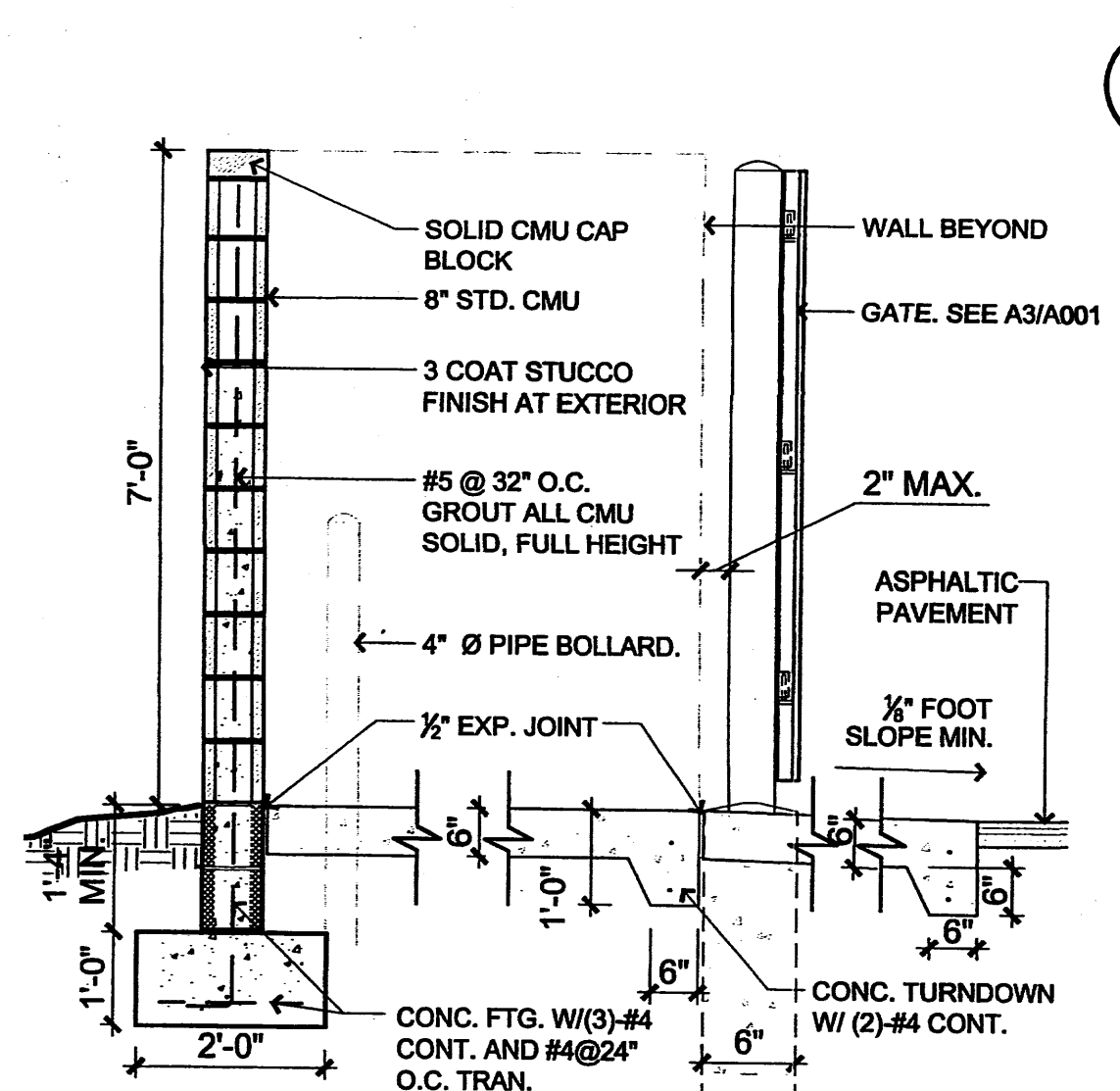
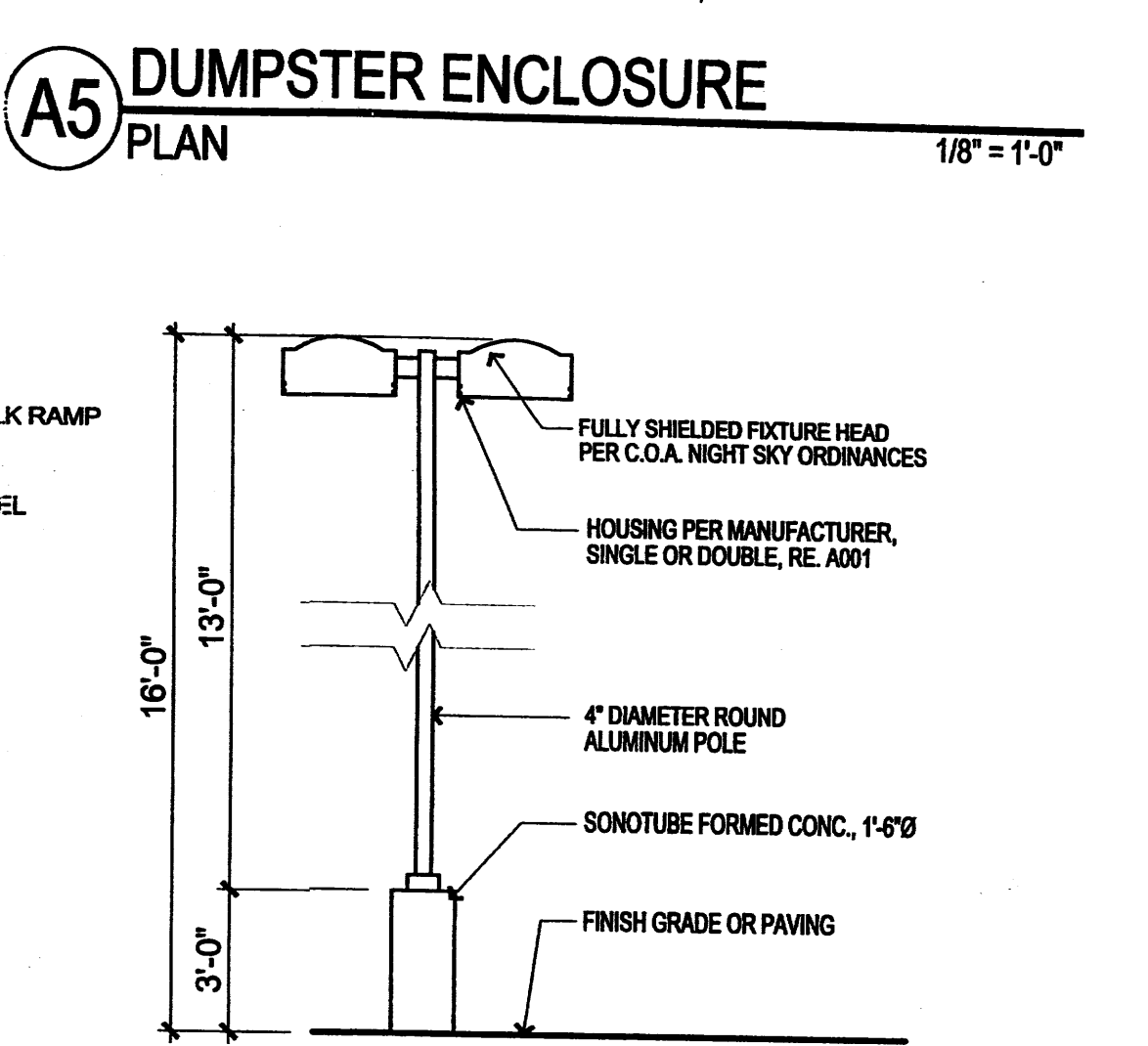
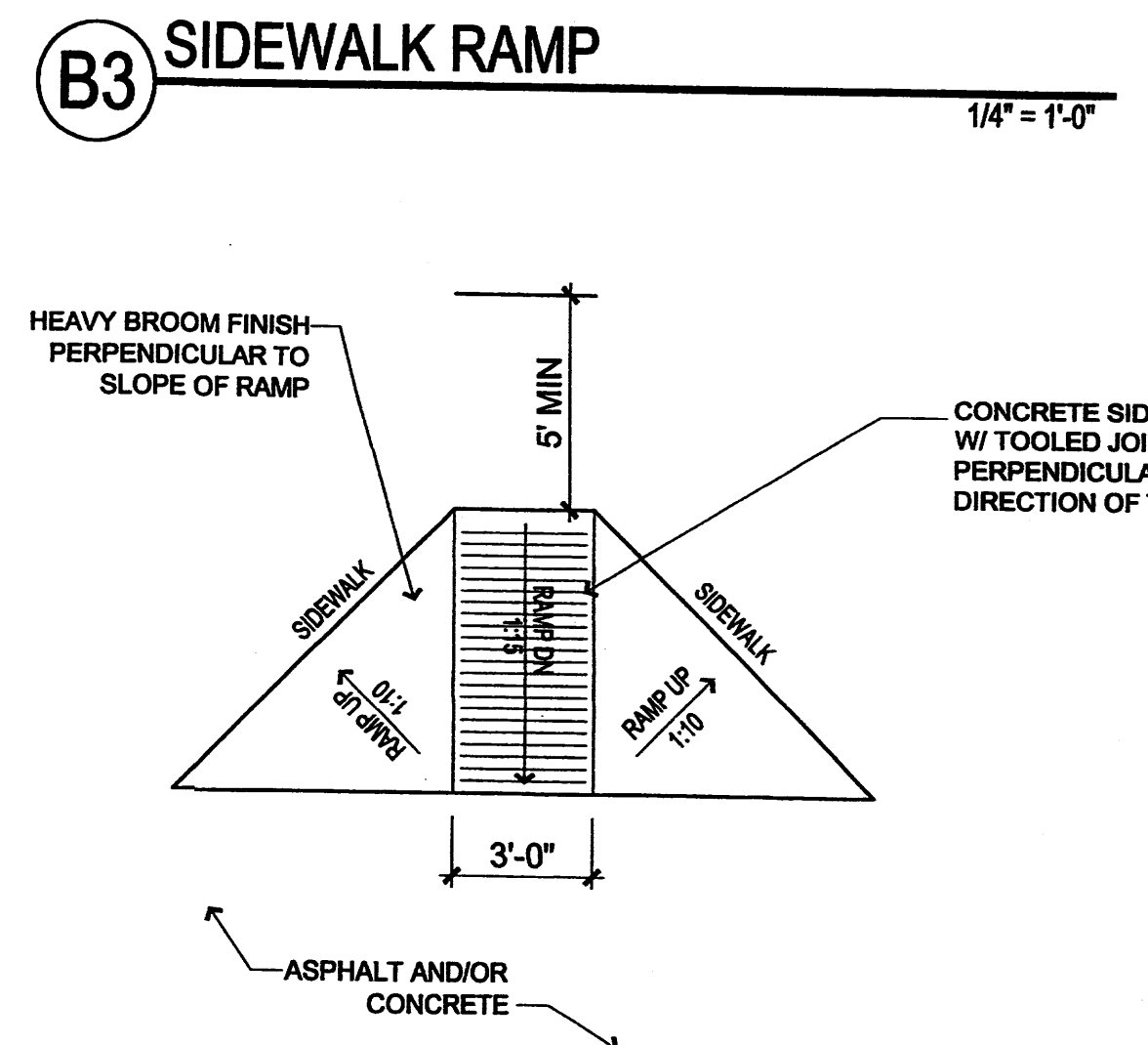
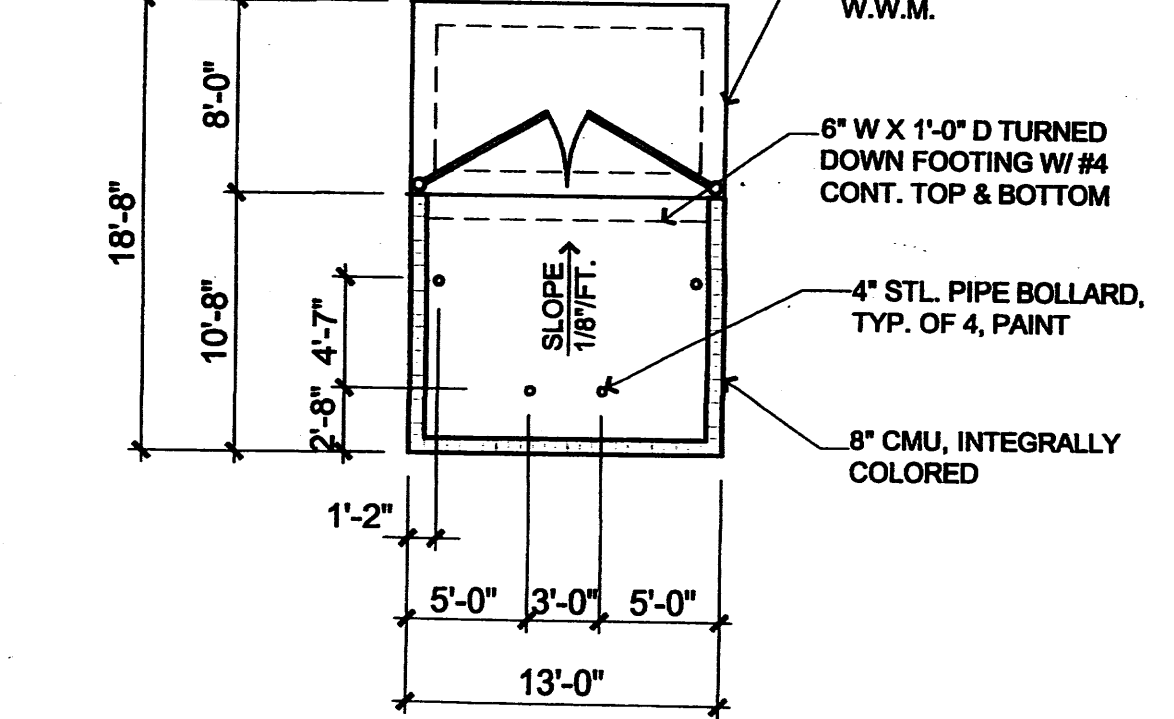
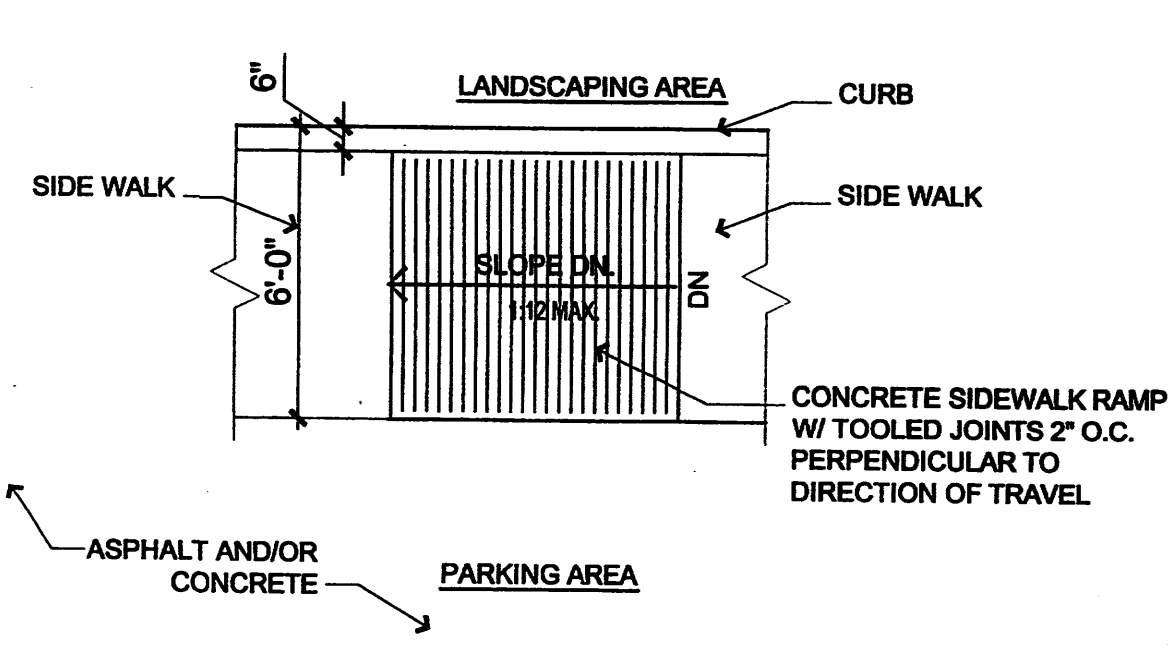
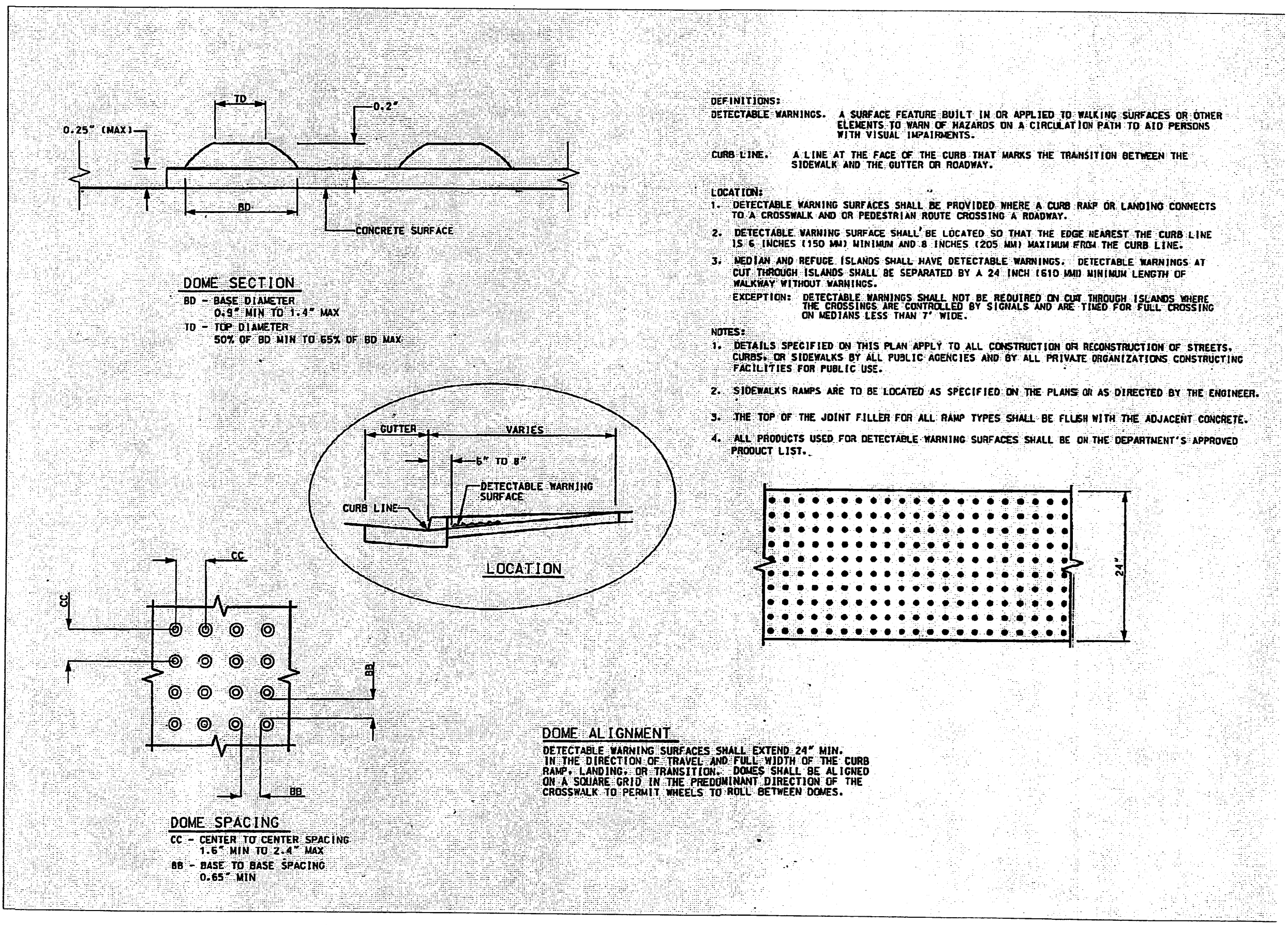
General Note: All ramps in the public Right of Way shall have detectable warning strips - RE. A091



PROJECT
St. Michael and All Angels
Episcopal Church
MINISTRY COMPLEX ADDITION
601 Montano Rd. NW, Albq. NM

REVISIONS
DRAWN BY
REVIEWED BY
DATE JULY 2, 2009
PROJECT NO. 09-0019
DRAWING NAME
SITE DEVELOPMENT PLAN FOR BUILDING PERMIT
SHEET NO. A001

RECEIVED
SEP 24 2010
HYDROLOGY
SECTION



*NOTE: RE. A001 FOR NUMBER OF REQUIRED SPACES PER RACK

GENERAL CONSTRUCTION NOTES

GENERAL

CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS, INCLUDING A TOP SOIL DISTURBANCE PERMIT, PRIOR TO START OF CONSTRUCTION.

ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

REFERENCES MADE TO STANDARD SPECIFICATIONS AND STANDARD DRAWINGS REFER TO THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION WITH ALL UPDATES.

THE CONTRACTOR SHALL NOT INSTALL ITEMS AS SHOWN ON THESE PLANS WHEN IT IS OBVIOUS THAT FIELD CONDITIONS ARE DIFFERENT THAN SHOWN IN THE PLANS. SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN A TIMELY MANNER. IN THE EVENT THE CONTRACTOR DOES NOT NOTIFY THE ENGINEER A TIMELY MANNER, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY AND EXPENSE FOR ANY REVISIONS NECESSARY, INCLUDING ENGINEERING DESIGN FEES.

EXISTING SITE IMPROVEMENTS WHICH ARE DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. REPAIRS SHALL BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION OF THE REPAIRS. REPAIRS SHALL BE ACCEPTED BY THE OWNER PRIOR TO FINAL PAYMENT.

EXISTING FENCING THAT IS NOT DESIGNATED FOR REMOVAL SHALL NOT BE DISTURBED. ANY FENCING THAT IS DISTURBED OR ALTERED BY THE CONTRACTOR SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. IF THE CONTRACTOR DESIRES TO REMOVE FENCING TO ACCOMMODATE CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL OBTAIN THE OWNER'S WRITTEN PERMISSION BEFORE FENCE IS REMOVED. CONTRACTOR SHALL RESTORE THE FENCE TO ITS ORIGINAL CONDITION AT THE EARLIEST OPPORTUNITY. WHILE ANY FENCING IS REMOVED, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SECURITY OF THE SITE UNTIL THE FENCE IS RESTORED.

WORK WITHIN ADJACENT RIGHT-OF-WAY

PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES WITHIN ADJACENT RIGHT-OF-WAYS OR WITHIN PROPERTY NOT OWNED BY THE OWNER OF THE PROJECT SITE, THE CONTRACTOR SHALL ASSURE THAT ALL PERMITS AND PERMISSIONS REQUIRED HAVE BEEN OBTAINED IN WRITING.

SURVEY MONUMENTS, PROPERTY CORNERS, BENCHMARKS

THE CONTRACTOR SHALL NOTIFY THE OWNER AT LEAST SEVEN DAYS BEFORE BEGINNING ANY CONSTRUCTION ACTIVITY THAT COULD DAMAGE OR DISPLACE SURVEY MONUMENTS, PROPERTY CORNERS, OR PROJECT BENCHMARKS SO THESE ITEMS MAY BE RELOCATED.

ANY SURVEY MONUMENTS, PROPERTY CORNERS, OR BENCHMARKS THAT ARE NOT IDENTIFIED FOR RELOCATION ARE THE RESPONSIBILITY OF THE CONTRACTOR TO PRESERVE AND PROTECT. RELOCATION OR REPLACEMENT OF THESE ITEMS SHALL BE DONE BY THE OWNER'S SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.

DIMENSIONS

ALL DIMENSIONS TO CURBS ARE TO THE FLOWLINE UNLESS OTHERWISE NOTED.

ALL STATIONING IS TO THE CENTERLINE OF THE RIGHT-OF-WAY UNLESS OTHERWISE NOTED.

ALL SLOPES AND GRADES ARE IN PERCENT UNLESS OTHERWISE NOTED.

CURB ELEVATIONS ARE SHOWN AT THE FLOW LINE UNLESS OTHERWISE NOTED. SEE THE DETAIL SHEET TO DETERMINE THE CURB HEIGHT ABOVE FLOW LINE.

SOILS

UNLESS OTHERWISE SPECIFIED, SUBGRADE, ENGINEERED FILL, AND STRUCTURAL FILL SHALL BE COMPACTED TO THE FOLLOWING SPECIFICATIONS OF THE ASTM D-1557 MAXIMUM DRY DENSITY.

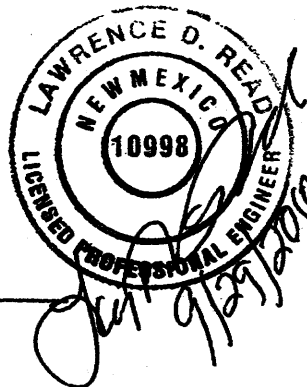
MATERIAL/LOCATION	PERCENT COMPACTION
STRUCTURAL FILL IN THE BUILDING AREA	95%
SUBBASE FOR SLAB SUPPORT	95%
MISCELLANEOUS BACKFILL BELOW STRUCTURAL FILL OR ROADWAY PAVEMENT	95%
MISCELLANEOUS BACKFILL BELOW UNPAVED, NON-BUILDING AREAS	90%
ROADWAY PAVEMENT SUBGRADE	95%
SIDEWALK SUBGRADE	90%
CURB AND GUTTER SUBGRADE	95%

DRAINAGE CERTIFICATION

I, Larry D. Read, NMPE 10998, of the firm Larry Read & Associates, Inc., hereby certify that this project has been graded and will drain in substantial compliance with and in accordance with the design intent of the approved plan dated 12/18/2009. The record information edited onto the original design document has been obtained by Thomas D. Johnston, NMPS 14269, of the firm Wayjohn Surveying. I further certify that I have personally visited the project site on 9/30/2010 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for Temporary Certificate of Occupancy.

Exceptions: As-built survey information as shown on the plan.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the Grading and Drainage aspects of this project. Those relying on this record document are advised to obtain independent verification of its accuracy before using it for any other purpose.



LEGEND

FND. CHIS. +	CONCRETE	WM	WATER METER
NS	NAIL & SHINER	FH	FIRE HYDRANT
R&C	REBAR & CAP	WV	WATER VALVE
Δ	HWY R/W MARKER T RAIL	□	SIGN
TC	TOP OF CURB	UG	UNDERGROUND
36.74	SPOT ELEV.	MH	MANHOLE
CONTOUR LINE	FP	FLAG POLE	
Φ	POWER POLE	V	VENT
→	DOWN GUY	CC	CORNER TO CORNER DIMENS.
YARD LIGHT	LP	LIGHT POLE	
		CLEAN OUT	
		UTILITY (WATER, SEWER, ELEC., GAS, ETC.)	

UTILITIES

IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE LOCATION ONLY BASED ON THE INFORMATION PROVIDED TO THE ENGINEER BY OTHERS. THIS INFORMATION MAY BE INACCURATE OR INCOMPLETE. ADDITIONALLY, UNDERGROUND LINES MAY EXIST THAT ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ACCORDANCE WITH CHAPTER 62, ARTICLE 14-1, THROUGH 14-8, NMSA 1978.

THE CONTRACTOR SHALL CONTACT THE STATEWIDE UTILITY LOCATOR SERVICE AT 1-800-321-2537 AT LEAST TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION. AFTER THE UTILITIES ARE SPOTTED, THE CONTRACTOR SHALL EXPOSE ALL PERTINENT UTILITIES TO VERIFY THEIR VERTICAL AND HORIZONTAL LOCATION. IF A CONFLICT EXISTS BETWEEN EXISTING UTILITIES AND PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMAL DELAY.

THE CONTRACTOR SHALL EXERCISE DUE CARE TO AVOID DISTURBING ANY EXISTING UTILITIES, ABOVE OR BELOW GROUND. UTILITIES THAT ARE DAMAGED BY CARELESS CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

EXISTING VALVES SHALL ONLY BE OPERATED BY THE UTILITY COMPANY. CONTRACTOR SHALL NOTIFY THE UTILITY A MINIMUM OF TWO WORKING DAYS BEFORE ANY VALVE, NEW OR EXISTING, NEEDS TO BE OPERATED.

THE CONTRACTOR SHALL COORDINATE ANY REQUIRED UTILITY INTERRUPTIONS WITH THE OWNER AND AFFECTED UTILITY COMPANY A MINIMUM OF THREE WORKING DAYS BEFORE THE INTERRUPTION.

THE CONTRACTOR SHALL MAINTAIN A RECORD DRAWING SET OF PLANS AND PROMPTLY LOCATE ALL UTILITIES, EXISTING OR NEW, IN THEIR CORRECT LOCATION, HORIZONTAL AND VERTICAL. THIS RECORD SET OF DRAWINGS SHALL BE MAINTAINED ON THE PROJECT SITE AND SHALL BE AVAILABLE TO THE OWNER AND ENGINEER AT ANY TIME DURING CONSTRUCTION.

EROSION CONTROL, ENVIRONMENTAL PROTECTION, AND STORM WATER POLLUTION PREVENTION PLAN

THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR SHALL PREPARE AND OBTAIN ANY DUST CONTROL OR EROSION CONTROL PERMITS FROM THE REGULATORY AGENCIES.

THE CONTRACTOR SHALL PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITH THE PUBLIC RIGHT-OF-WAY OR ADJACENT PROPERTY TO KEEP IT FROM WASHING OFF THE PROJECT SITE.

THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY BY CONSTRUCTION TEMPORARY EROSION CONTROL BERRMS OR INSTALLING SILT FENCES AT THE PROPERTY LINES AND NETTING SOIL TO PREVENT IT FROM BLOWING.

WATERING, AS REQUIRED FOR CONSTRUCTION DUST CONTROL, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE. CONSTRUCTION AREAS SHALL BE WATERED FOR DUST CONTROL IN COMPLIANCE WITH GOVERNMENT ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SUPPLYING WATER AS REQUIRED.

ANY AREAS DISTURBED BY CONSTRUCTION AND NOT COVERED BY LANDSCAPING OR IMPERVIOUS SURFACES SHALL BE REVEGETATED WITH RECLAMATION SEEDING.

THE CONTRACTOR SHALL PROPERLY HANDLE AND DISPOSE OF ALL ASPHALT REMOVED ON THE PROJECT BY HAULING TO AN APPROVED DISPOSAL SITE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEW MEXICO SOLID WASTE ACT.

ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING ITEMS DESIGNED FOR REMOVAL, CONSTRUCTION WASTE, CONSTRUCTION EQUIPMENT WASTE PRODUCTS (OIL, GAS, TIRES, ETC.), GARBAGE, GRUBBING, EXCESS CUT MATERIAL, VEGETATIVE DEBRIS, ETC., SHALL BE APPROPRIATELY DISPOSED OF OFFSET AT NO ADDITIONAL COST TO THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY PERMITS REQUIRED FOR HAUL OR DISPOSAL OF WASTE PRODUCTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE WASTE DISPOSAL SITE COMPLIES WITH GOVERNMENT REGULATIONS REGARDING THE ENVIRONMENT, ENDANGERED SPECIES, AND ARCHAEOLOGICAL RESOURCES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANUP AND REPORTING OF SPILLS OF HAZARDOUS MATERIALS ASSOCIATED WITH THE CONSTRUCTION SITE. HAZARDOUS MATERIALS, INCLUDES GASOLINE, DIESEL FUEL, MOTOR OIL, SOLVENTS, CHEMICALS, PAINT, ETC. WHICH MAY BE A THREAT TO THE ENVIRONMENT. THE CONTRACTOR SHALL REPORT THE DISCOVERY OF PAST OR PRESENT SPILLS TO THE NEW MEXICO EMERGENCY RESPONSE AT 1-800-219-6157.

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING SURFACE AND UNDERGROUND WATER, CONTACT WITH SURFACE WATER BY CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL BE MINIMIZED, EQUIPMENT MAINTENANCE AND REFUELING OPERATIONS SHALL BE PERFORMED IN AN ENVIRONMENTALLY SAFE MANNER IN COMPLIANCE WITH GOVERNMENT REGULATIONS.

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING CONSTRUCTION NOISE AND HOURS OF OPERATION.

ACCESSIBLE FACILITIES

ALL SURFACES ALONG ACCESSIBLE ROUTES AND FOR HANDICAP RAMPS SHALL BE STABLE FIRM, SLIDE RESISTANT AND SHALL COMPLY WITH UNIFORM FEDERAL ACCESSIBILITY STANDARDS, PARAGRAPH 4.5.

LONGITUDINAL SLOPES ALONG ACCESSIBLE ROUTE SIDEWALKS, EXCEPT AT HANDICAP RAMPS, SHALL NOT BE STEEPER THAN 1:20. CROSS SLOPES ALONG ACCESSIBLE ROUTE SIDEWALKS EXCEPT AT HANDICAP RAMPS, SHALL NOT BE STEEPER THAN 1:48. SLOPES IN ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND PASSENGER LOADING ZONES SHALL NOT BE STEEPER THAN 1:48 IN ALL DIRECTIONS.

THE SITE SHALL COMPLY WITH ANSI A117.1-1992, "ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES".

TRAFFIC CONTROL

THE CONTRACTOR SHALL PROVIDE ALL REQUIRED TRAFFIC CONTROL PLANS. ALL SIGNS, BARRICADES, CHANNELIZATION DEVICES, SIGN FRAMES AND ERECTION OF SUCH DEVICES SHALL CONFORM TO THE REQUIREMENTS OF "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" LATEST EDITION. PRIOR TO CONSTRUCTION, TRAFFIC CONTROL PLANS SHALL BE APPROVED BY THE GOVERNING AUTHORITY.

TABLE 1 ST. MICHAEL'S EPISCOPAL CHURCH 100-YEAR HYDROLOGIC CALCULATIONS DEC 09'												
BASIN #	AREA (acre)	LAND TREATMENT				WEIGHTED E (in)	V (6-hr) (acre-ft)	V (6-hr) (cu-ft)	V(10 day) (acre-ft)	V(10 day) (cu-ft)	Q (cfs)	
		A (%)	B (%)	C (%)	D (%)							
EXISTING SITE DISCHARGE												
B1	0.2842	0.0	0.0	87.0	13.0	1.26	0.03	1,207	0.03	1,391	0.88	
B2	0.1416	0.0	28.0	37.0	35.0	1.38	0.02	708	0.02	973	0.49	
B3	0.0060	0.0	0.0	0.0	100.0	2.12	0.00	46	0.00	78	0.03	
B4	0.9003	0.0	5.0	4.0	91.0	2.01	0.15	6,580	0.25	10,952	4.07	
B5	0.0068	0.0	0.0	0.0	100.0	2.12	0.00	53	0.00	89	0.03	
B6	0.2525	0.0	22.0	37.0	41.0	1.46	0.03	1,337	0.04	1,890	0.91	
B7	0.4899	0.0	0.0	33.0	67.0	1.79	0.07	3,189	0.11	4,940	2.05	
B8	0.0179	0.0	0.0	100.0	0.0	1.13	0.00	74	0.00	74	0.06	
TOTAL	2.08						0.30	13,194	0.47	20,386	8.51	
PROPOSED CONDITIONS												
B1	1.2915	0.0	6.0	8.0	86.0	1.96	0.21	9,190	0.35	15,117	5.72	
B2	0.0124	0.0	100.0	0.0	0.0	0.78	0.00	35	0.00	35	0.03	
B3	0.0087	0.0	0.0	0.0	100.0	2.12	0.00	67	0.00	113	0.04	
B4	0.0068	0.0	0.0	0.0	100.0	2.12	0.00	53	0.00	89	0.03	
B5	0.2525	0.0	22.0	37.0	41.0	1.46	0.03	1,337	0.04	1,890	0.91	
B6	0.4899	0.0	0.0	33.0	67.0	1.79	0.07	3,189	0.11	4,940	2.05	
B7	0.0179	0.0	0.0	100.0	0.0	1.13	0.00	74	0.00	74	0.06	
TOTAL	2.08						0.32	13,945	0.51	22,258	8.84	
EXCESS PRECIP.	0.53	0.78	1.13	2.12		E (in)						
PEAK DISCHARGE	1.56	2.28	3.14	4.7		Qm (cfs)						
WEIGHTED E (in) = (Ea)(%A) + (Eb)(%B) + (Ec)(%C) + (Ed)(%D)												
V6-hr (acre-ft) = (WEIGHTED E)(AREA)/12												
V10day (acre-ft) = V6-hr + (Ad)(P10day - P6-hr)/12												
Q (cfs) = (Qm)(Aa) + (Qm)(Ab) + (Qm)(Ac) + (Qm)(Ad)												
ZONE = 2												
P6-hr (in.) = 2.35												
P24-hr (in.) = 2.75												
P10day (in.) = 3.95												

ABBREVIATIONS

A	= AIR LINE	NG	= NATURAL GROUND
AD	= AREA DRAIN	PB	= ELECTRICAL PULL BOX
AIP	= ABANDONED IN PLACE	PCC	= PORTLAND CEMENT CONCRETE
BLDG.	= BUILDING	PP	= POWER POLE
BM	= BENCHMARK	PVC	= POLYVINYL CHLORIDE PIPE
CATV	= CABLE TELEVISION LINE	RCP	= REINFORCED CONCRETE PIPE
CIP	= CAST IRON PIPE	RD	= ROOF DRAIN
CMP	= CORRUGATED METAL PIPE	R/W	= RIGHT-OF-WAY
CMPA	= CORRUGATED METAL PIPE ARCH	S	= SLOPE
CO	= CLEANOUT	SAS	= SANITARY SEWER
CONC	= CONCRETE	SD	= STORM DRAIN
CL	= CENTERLINE	STA	= STATION
DIA	= DIAMETER	STD	= STANDARD
DIP	= DUCTILE IRON PIPE	SW	= SIDEWALK
E	= ELECTRIC LINE	T	= TELEPHONE
ELEV	= ELEVATION	TA	= TOP OF ASPHALT PAVEMENT
FF	= FINISHED FLOOR ELEVATION	TAC	= TOP OF ASPHALT CURB
FG	= FINISHED GRADE	TC	=
FH	= FIRE HYDRANT	TCC	= TOP OF CONCRETE SLURB (PAVEMENT)
G	= GAS PIPE	TG	= TOP OF GRATE
GM	= GAS METER	TS	= TOP OF SIDEWALK
GV	= GATE VALVE	TW	= TOP OF WALL
HI PT	= HIGH POINT	TYP	= TYPICAL
INV	= INVERT ELEVATION	TB	= TELEPHONE BOX
LF	= LINEAL FEET	UE	= UNDERGROUND ELECTRIC
LP	= LIGHT POLE	UT	= UNDERGROUND TELEPHONE
L/S	= LANDSCAPING	W	= WATER
MH	= MANHOLE	WM	= WATER METER
		WV	= WATER VALVE

DRAINAGE DISCUSSION

LOCATION & DESCRIPTION

SAINT MICHAEL'S ALL ANGLES CHURCH IS PROPOSING TO CONSTRUCT AN ADDITION ON THE WEST END THE EXISTING CHURCH AND MODIFY THE EXISTING PAVED PARKING LOT TO THE SOUTH OF THE ADDITION. IN ORDER TO FACILITATE THE REQUIRED PARKING, THE CHURCH HAS PURCHASED AND IS PROPOSING TO REPLAT INTO THE EXISTING PARCEL (LOT 9A) THE RESIDENTIAL LOT TO THE WEST (LOT 10A). THIS REPLAT WILL PROVIDE SUFFICIENT PARKING AND TRAFFIC CIRCULATION FOR THE FACILITY WITH THE ADDITION INCORPORATED. THE REPLATED PARCEL WILL ENCOMPASS APPROXIMATELY 2.0 ACRES.

HYDROLOGY

THE HYDROLOGY FOR THIS PROJECT WAS ANALYZED USING THE QUICK CALCULATIONS OF THE JUNE 1997 RELEASE OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, SECTION 22.2.

PRECIPITATION

THE 100-YR, 6-HR DURATION STORM EVENT WAS USED AS THE DESIGN STORM FOR THIS ANALYSIS. THE SITE LIES WITHIN THE ZONE 2 PRECIPITATION AREA FOR THE CITY OF ALBUQUERQUE, AS IDENTIFIED IN THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, SECTION 22.2. THEREFORE, TABLES WITHIN THIS SECTION WERE USED TO ESTABLISH THE EXCESS PRECIPITATION AND PEAK DISCHARGE.

EXISTING DRAINAGE

THE WESTERN PORTION OF LOT 9A DRAINS SOUTH, ACROSS THE EXISTING ASPHALT PAVED PARKING LOT, AND GATHERS IN A DEPRESSED LANDSCAPE AREA BETWEEN THE SIDEWALK ALONG MONTANO ROAD AND THE SOUTH EDGE OF THE PARKING LOT. ONCE IN THIS LANDSCAPE AREA, THE RUNOFF INFILTRATES UNTIL IT ENTERS THE EXISTING 18" CONCRETE STORM DRAIN LATERAL INSTALLED WITH THE MONTANO STORM DRAIN. THERE IS NO FORMAL STORM INLET. THE MAJORITY OF LOT 10A IS BELOW THE ELEVATION ON MONTANO BLVD.

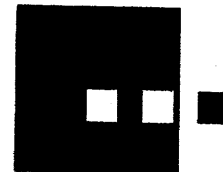
LOT 10A SHEET FLOWS FROM NORTH TO SOUTH UNTIL THE RUNOFF DISCHARGES INTO MANTANO OVER THE EXISTING SIDEWALK.

THE PARCELS SURROUNDING LOT 10A AND 9A ARE ALL DEVELOPED. THE RESIDENTIAL LOTS TO THE NORTH DRAIN NORTH AND DO NOT IMPACT THIS PROJECT. TO THE SOUTH, IS MONTANO BLVD., WHICH HAS A RELATIVE RECENT STORM DRAIN SYSTEM INSTALLED. THE LOTS TO THE EAST AND WEST DRAIN VIA SURFACE FLOW INTO MONTANO AND DON NOT IMPACT THIS SITE.

DEVELOPED CONDITION

THE ADDITIONS TO THE CHURCH ON THE WEST END WILL HAVE ONLY MINOR IMPACTS TO THE EXISTING DRAINAGE PATTERNS. THE NARROW STRIP OF LAND BETWEEN THE ADDITION AND THE NORTH PROPERTY LINE WILL DRAIN VIA SWALE TO THE WEST, AROUND THE OPEN END OF THE AND THEN SOUTH ACROSS THE PARKING LOT TO THE CURRENT LANDSCAPED AREA SOUTH OF THE PARKING LOT PAVEMENT. SINCE IT IS PROPOSED TO REPLAT LOT 10A INTO THIS SITE, THE PROPOSED PAVED PARKING WILL DRAIN EAST ON THE SURFACE INTO THE EXISTING PARKING LOT AND JOIN WITH THE CURRENT DISCHARGES.

THIS GRADING PLAN IS PROPOSING TO FORMALIZE THE DRAINAGE DISCHARGE INTO THE ONSITE STORM LATERAL BY CONSTRUCTING A TYPE 'D' INLET WITHIN THE LANDSCAPE AREA. CONSTRUCTION OF THIS ADDITION AND REPLAT WILL NOT IMPACT ANY ADJACENT PARCELS.

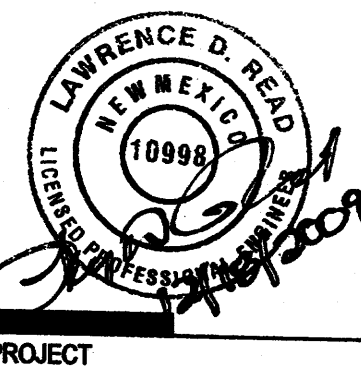


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ARCHITECT

ENGINEER



PROJECT

**St. Michael and All Angels
Episcopal Church
MINISTRY COMPLEX ADDITION
601 Montano Rd. NW, Albq. NM**

REVISIONS

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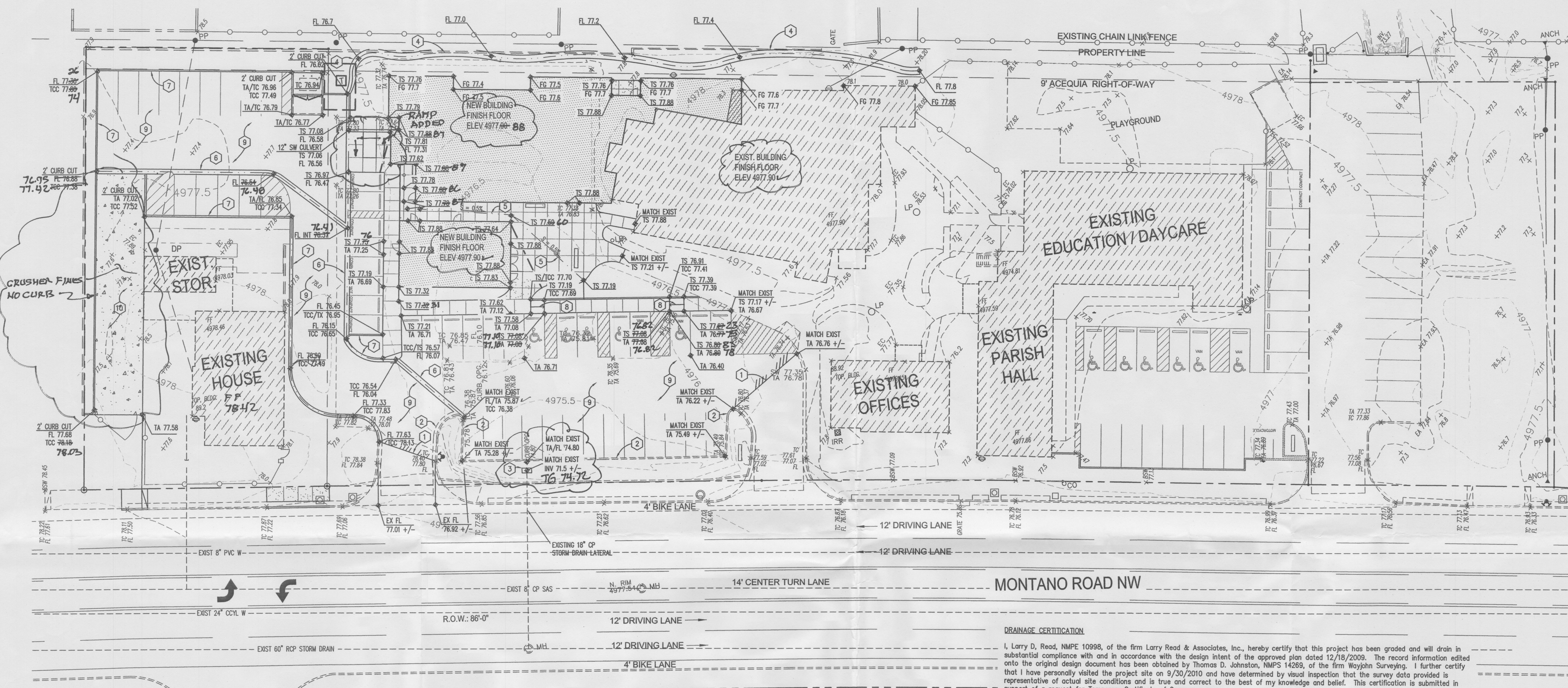
REVIEWED BY

DATE OCTOBER 13, 2009

PROJECT NO. 09-0019

DRAWING NAME

**CIVIL
GENERAL NOTES
RECEIVED**
OCT 01 2010
SHEET NO. 1 OF 1
HYDROLOGY
SECTION
C1



1 GRADING PLAN
C2 1" = 20'

DRAINAGE CERTIFICATION

I, Larry D. Read, NMPE 10998, of the firm Larry Read & Associates, Inc., hereby certify that this project has been graded and will drain in substantial compliance with and in accordance with the design intent of the approved plan dated 12/18/2009. The record information edited onto the original design document has been obtained by Thomas D. Johnston, NMPS 14269, of the firm Wayjohn Surveying. I further certify that I have personally visited the project site on 9/30/2010 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for Temporary Certificate of Occupancy.

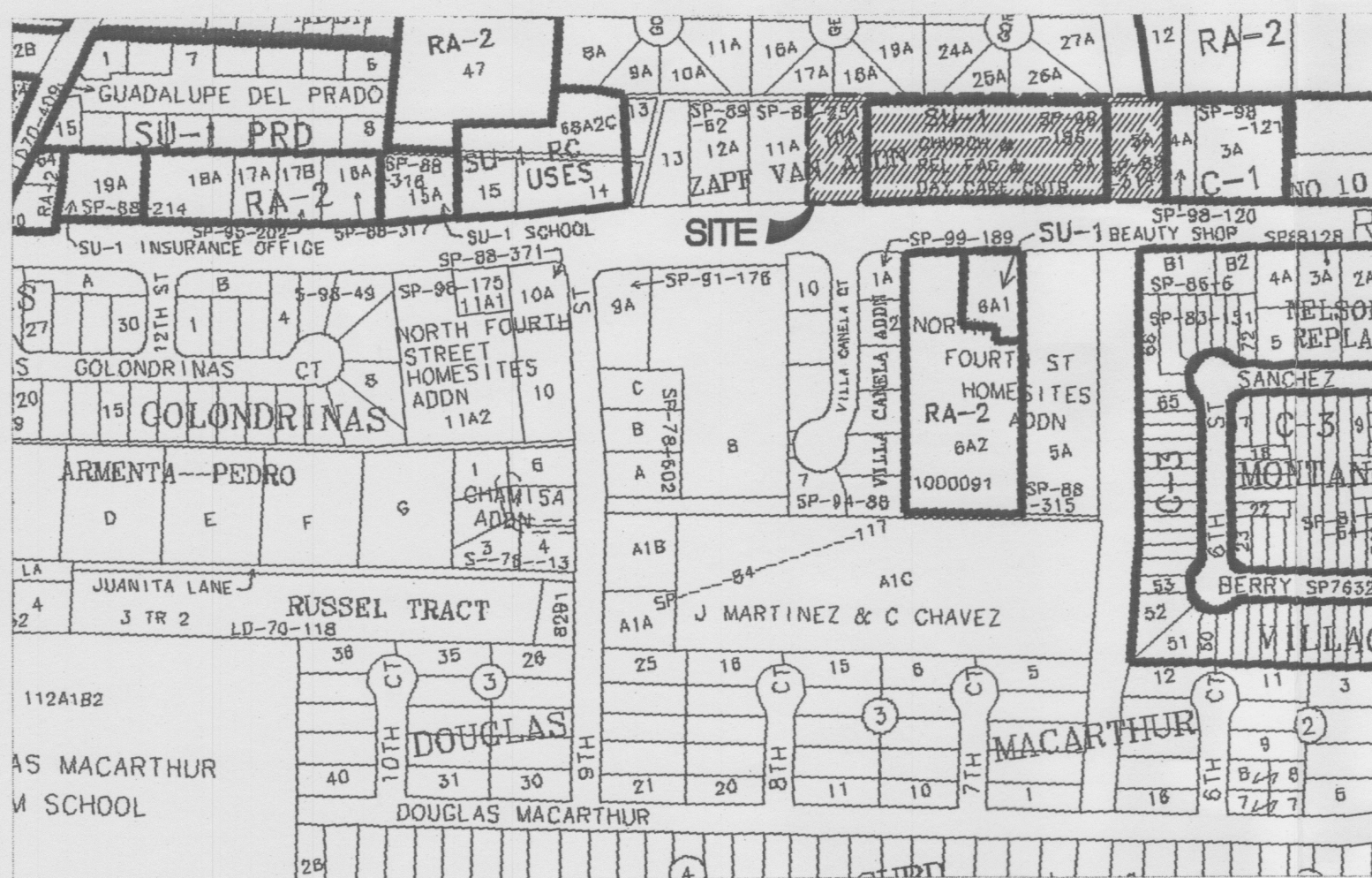
Exceptions: As-built survey information as shown on the plan.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the Grading and Drainage aspects of this project. Those relying on this record document are advised to obtain independent verification of its accuracy before using it for any other purpose.



KEYED NOTES

- 1 LIMIT OF NEW PAVEMENT. MATCH EXISTING.
- 2 LIMIT OF NEW PAVEMENT. CURB TO REMAIN MATCH EXISTING TOP OF ASPHALT.
- 3 BUILD NEW TYPE 'D' STORM DRAIN INLET PER CITY OF ALBUQUERQUE STANDARD DRAWING 2206. MATCH INVERT EXISTING STORM DRAIN LATERAL.
- 4 BUILD 3' WIDE ROCK LINED SWALE PER DETAIL 2/C3.
- 5 CONSTRUCT SWALE TO THE GRADES SHOWN IN CONCRETE PATIO.
- 6 CONSTRUCT NEW 2' WIDE CONCRETE VALLEY GUTTER PER DETAIL 1/C3.
- 7 CONSTRUCT NEW CONCRETE CURB.
- 8 CONSTRUCT NEW WHEELCHAIR RAMP @ 1:12 MAXIMUM SLOPE AND ALL ANSI AND ADA REQUIREMENTS.
- 9 NEW PAVEMENT PER ARCHITECTURAL DETAILS.
- 10 CONSTRUCT NEW GRAVEL PAVEMENT PER SHEET A101.



VICINITY MAP ZONE ATLAS PAGE F-14-Z



THE PROPERTY SHOWN HEREON DOES NOT HAVE A 100-YEAR DESIGNATED FLOODPLAIN ONSITE PER THE FEMA FLOOD INSURANCE RATE MAP OF THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, COMMUNITY-PANEL NO. 35001C0119-G; EFFECTIVE DATE SEPTEMBER 26, 2008. AS SHOWN HEREIN.

FLOODPLAIN