

DRAINAGE PLAN EROSION CONTROL NOTES CALCULATIONS SECTIONS AND DETAILS

SITE CHARACTERISTICS CALCULATIONS

1. PRECIPITATION ZONE = 2
2. $P_{6,100} = P_{360} = 2.35$ IN.
3. TOTAL AREA (A_t) = 94,400 SF/2.17 AC
4. EXISTING LAND TREATMENT
- | TREATMENT | AREA (SF/AC) | % |
|-----------|--------------|----|
| B | 47,940/1.10 | 51 |
| C | 16,910/0.39 | 18 |
| D | 29,550/0.68 | 31 |
5. DEVELOPED LAND TREATMENT
- | TREATMENT | AREA (SF/AC) | % |
|-----------|--------------|----|
| B | 45,820/1.05 | 48 |
| C | 19,400/0.45 | 21 |
| D | 29,180/0.67 | 31 |

EXISTING CONDITION

1. VOLUME
- $$E_w = (E_{A^A} + E_{B^B} + E_{C^C} + E_{D^D}) / A_t$$
- $$E_w = [(0.78)(1.10) + (1.13)(0.39) + (2.12)(0.68)] / (2.17) = 1.26$$
- $$V_{100} = (E_w / 12) A_t$$
- $$V_{100} = (1.26 / 12)(94,400) = 9,910$$
2. PEAK DISCHARGE
- $$Q_p = Q_{PA^A} + Q_{PB^B} + Q_{PC^C} + Q_{PD^D}$$
- $$Q_p = Q_{100} = (2.28)(1.10) + (3.14)(0.39) + (4.70)(0.68) = 6.9$$

DEVELOPED CONDITION

1. VOLUME
- $$E_w = (E_{A^A} + E_{B^B} + E_{C^C} + E_{D^D}) / A_t$$
- $$E_w = [(0.78)(1.05) + (1.13)(0.45) + (2.12)(0.67)] / (2.17) = 1.27$$
- $$V_{100} = (E_w / 12) A_t$$
- $$V_{100} = (1.27 / 12)(94,400) = 9,990$$
2. PEAK DISCHARGE
- $$Q_p = Q_{PA^A} + Q_{PB^B} + Q_{PC^C} + Q_{PD^D}$$
- $$Q_p = Q_{100} = (2.28)(1.05) + (3.14)(0.45) + (4.70)(0.67) = 7.0$$

COMPARISON

1. $\Delta V_{100} = 9,990 - 9,910 = 80$ CF (INCREASE)
2. $\Delta Q_{100} = 7.0 - 6.9 = 0.1$ CFS (INCREASE)

DECKER ROAD CALCULATIONS

AREA TO BE VACATED: 6,675 SF/0.15 AC
LAND TREATMENT: C (EXISTING AND DEVELOPED)
 $V_{100} = (1.13 / 12)(6,675) = 630$ CF
 $Q_{100} = (3.14)(0.15) = 0.5$ CFS

Erosion Control Measures:

1. The contractor shall ensure that no soil erodes from the site into public right-of-way or onto private property.
2. The contractor shall promptly clean up any material excavated within the public right-of-way so that the excavated material is not susceptible to being washed down the street.
3. The contractor shall secure "Topsoil Disturbance Permit" prior to beginning construction.
4. Any areas of excess disturbance (traffic access, storage yard, excavated material, etc.) shall be re-seeded according to C.O.A. Specification 1012 "Native Grass Seeding". This will be considered incidental to construction, therefore, no separate payment will be made.

EXECUTIVE SUMMARY

THIS PLAN REPRESENTS SITE MODIFICATIONS TO THE EXISTING ALL FAITHS RECEIVING HOME. THE PROPOSED IMPROVEMENTS CONSIST OF BUILDING ADDITIONS, NEW BUILDING CONSTRUCTION, PLAYGROUND CONSTRUCTION, AND LANDSCAPING IMPROVEMENTS. AT PRESENT, THE SITE IS DEVELOPED WITH EXISTING BUILDINGS AND ASSOCIATED PAVING AND LANDSCAPING IMPROVEMENTS. THE SURROUNDING AREA IS DEVELOPED RESIDENTIALLY. THE IMPROVEMENTS PROPOSED HEREIN CONSIST OF MODIFICATIONS TO AN EXISTING SITE WITHIN AN INFILL AREA. THIS SUBMITTAL IS FOR SITE DEVELOPMENT PLAN FOR BUILDING PERMIT APPROVAL AND TO SUPPORT THE VACATION OF DECKER ROAD N.W.

INTRODUCTION

A DRAINAGE INFORMATION SHEET IS INCLUDED WITH THIS SUBMITTAL. A SEPARATE SUBMITTAL WILL BE PREPARED FOR BUILDING PERMIT APPROVAL. NO PUBLIC INFRASTRUCTURE IS ANTICIPATED. HENCE AN INFRASTRUCTURE LIST HAS NOT BEEN INCLUDED WITH THIS SUBMITTAL.

REFERENCES

THE FOLLOWING IS A LIST OF RELATED SUBMITTALS FOR THIS SITE. THIS LIST MAY NOT BE INCLUSIVE, HOWEVER, REPRESENTS A SUMMARY OF THOSE PLANS WHICH ARE KNOWN TO THIS PREPARER.

1. PENDING SITE DEVELOPMENT PLAN FOR BUILDING PERMIT APPROVAL SUBMITTED 7/28/98 BY SANDERS-ROGERS ARCHITECTS (Z-98-104).
2. PENDING VACATION (DECKER ROAD N.W.) AND SKETCH PLAT SUBMITTED 7/09/98 BY JEFF MORTENSEN & ASSOCIATES, INC. (V-98-64, DRB 98-257).

PROJECT DESCRIPTION

AS SHOWN BY THE VICINITY MAP, THE SITE IS LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF TRELIS DRIVE N.W. AND DECKER ROAD N.W. THERE IS CURRENTLY A VACATION REQUEST BEING MADE TO THE DEVELOPMENT REVIEW BOARD TO VACATE THE PORTION OF DECKER ROAD N.W. WEST OF TRELIS DRIVE N.W. THE SITE IS ZONED SJU-1 FOR CHILDREN'S HOME, AND IS THEREFORE SUBJECT TO SITE PLAN CONTROL. THE CURRENT LEGAL DESCRIPTION IS TRACT B2, CANDELARIA FARM AREA, AS SHOWN BY PANEL 118 OF 825 PUBLISHED BY THE NATIONAL FLOOD INSURANCE PROGRAM FOR BERNALILLO COUNTY, NEW MEXICO, AND INCORPORATED AREAS, DATED SEPTEMBER 20, 1996. THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE.

EXISTING CONDITIONS

THE SITE IS CURRENTLY DEVELOPED AS A CHILDREN'S HOME WITH SEVERAL SITE BUILDINGS AND RELATED PLAYGROUND, LANDSCAPING AND PAVING IMPROVEMENTS. THE SITE CONTAINS BOTH GRAVEL AND PAVED PARKING AREAS. THE ACCESS TO THE SITE IS FROM TRELIS DRIVE N.W. TO THE PAVED PARKING, AND FROM DECKER ROAD N.W. TO THE GRAVEL PARKING. TRELIS DRIVE N.W. IS A DEVELOPED PUBLIC STREET WITH ASPHALT PAVEMENT, CURB AND GUTTER AND SIDEWALK. DECKER ROAD N.W. IS CURRENTLY CITY PROPERTY (VIA WARRANTY DEED) AND IS A GRAVEL ROAD. AS PREVIOUSLY INDICATED, A VACATION REQUEST IS PENDING FOR DECKER ROAD N.W. RUNOFF WITHIN TRELIS DRIVE N.W. IS BLOCKED FROM ENTERING DECKER ROAD N.W. VIA AN EXISTING DRIVEPAD; RETAINING A PUBLIC DRAINAGE EASEMENT IS NOT WARRANTED. THE EXISTING SITE DISPLAYS LITTLE TOPOGRAPHIC RELIEF AND LACKS WELL DEFINED DRAINAGE PATTERNS. THERE IS LESS THAN ONE VERTICAL FOOT OF FALL FROM THE NORTHWEST CORNER OF THE SITE TO THE SOUTHEAST CORNER OF THE SITE. IN THE EXISTING CONDITION, IT APPEARS THAT SITE RUNOFF WILL DISCHARGE TO THE AFOREMENTIONED PUBLIC STREETS ONLY AFTER EXCEEDING THE INITIAL INFILTRATION AND ABSTRACTION CAPACITIES OF THE EXISTING SITE IMPROVEMENTS, AND THE CAPACITIES OF ANY SHALLOW DEPRESSED AREAS. THE SITE DOES NOT ACCEPT OFFSITE FLOWS FROM DECKER ROAD N.W. OR TRELIS DRIVE N.W., OR FROM THE RESIDENTIALLY DEVELOPED PROPERTIES TO THE NORTH. THE CITY OPEN SPACE LAND TO THE WEST EXHIBITS PARALLEL TOPOGRAPHY AND THEREFORE DOES NOT GENERATE OR CONTRIBUTE OFFSITE FLOWS. THE THREE RESIDENTIAL LOTS WHICH LIE TO THE SOUTH OF THE SITE ACROSS DECKER ROAD N.W. DO NOT CONTRIBUTE RUNOFF TO DECKER ROAD N.W. THEREFORE, DO NOT REQUIRE A PRIVATE DRAINAGE EASEMENT TO ALLOW THE DECKER ROAD N.W. VACATION. DECKER ROAD N.W. LACKS A WELL-DEFINED FLOWLINE, HOWEVER, DOES HAVE POSITIVE DRAINAGE TO TRELIS DRIVE N.W. TRELIS DRIVE N.W., THEREFORE, IS THE OUTFALL FOR RUNOFF FROM THIS SITE.

DEVELOPED CONDITIONS

AS PREVIOUSLY MENTIONED, THE PROPOSED IMPROVEMENTS CONSIST OF NEW BUILDING CONSTRUCTION, NEW PLAYGROUND CONSTRUCTION, AND NEW LANDSCAPING IMPROVEMENTS. THE EXISTING PAVED PARKING LOCATED AT THE EAST END OF THE SITE WILL BE REMOVED AND REPLACED WITH A SAND PLAYGROUND. FOR THE PURPOSES OF DRAINAGE CALCULATIONS, SAND WAS ASSUMED TO BE LAND TREATMENT 'B' IN THIS ANALYSIS. AS SHOWN BY THE CALCULATIONS, THE REMOVAL OF THIS PAVED PARKING AREA OFFSETS THE INTRODUCTION OF IMPERVIOUS AREA CREATED BY THE NEW BUILDING CONSTRUCTION. THE CHANGE IN PEAK RATE AND VOLUME OF RUNOFF GENERATED BY THIS SITE DUE TO THE PROPOSED CONSTRUCTION IS NEGLIGIBLE. RUNOFF FROM THIS SITE WILL CONTINUE TO DRAIN TO TRELIS DRIVE N.W. AS INDICATED IN THE EXISTING CONDITIONS, THE CURRENT SITE DRAINAGE CONDITION REPRESENTS SIGNIFICANT CONSTRAINTS WHICH LIMIT THE ABILITY TO PROVIDE POSITIVE DRAINAGE (SLOPES OF 1% OR GREATER) TO PUBLIC RIGHTS-OF-WAY. IT IS FOR THESE REASONS THAT THE SITE IS SIMILAR IN CONCEPT TO A "FLAT GRADING SCHEME" WHICH EXHIBITS LITTLE TOPOGRAPHIC RELIEF AND DEFINED DRAINAGE PATTERNS DUE TO THE LACK OF AVAILABLE GRADE. THE PROPOSED GRADING, AS SHOWN HEREIN, HAS BEEN ACCOMPLISHED IN A MANNER SUCH THAT ALL FINISHED FLOOR ELEVATIONS WILL BE ABOVE THE PROPOSED AND/OR EXISTING GROUND ELEVATIONS TO PREVENT POTENTIAL FLOODING. THE PROPOSED PLAYGROUND AND LANDSCAPING IMPROVEMENTS WILL BE GRADED SUCH THAT THERE IS NO CHANCE FOR RUNOFF TO ACCUMULATE WITHOUT DISCHARGING THROUGH ONE OF TWO OUTLET LOCATIONS. THESE LOCATIONS ARE IDENTIFIED ON THE GRADING PLAN. FURTHERMORE, THERE WILL BE NUMEROUS PVC SLEEVES CONSTRUCTED IN THE NEW STRAW BALE WALL ALONG THE EAST PROPERTY LINE OF THE SITE WHICH WILL ALLOW ACCUMULATED RUNOFF TO EXIT THE SITE BEFORE IT BECOMES A THREAT TO EXISTING AND/OR PROPOSED BUILDINGS. IN ALL CASES, THE PROPOSED GRADES WILL EITHER PROVIDE FOR FLAT OR GRADUALLY SLOPED AREAS. RUNOFF IN GENERAL WILL BE DIRECTED AWAY FROM ALL BUILDINGS. IN KEEPING WITH THE CHARACTER OF THE SURROUNDING NEIGHBORHOOD, THE PROPOSED CONSTRUCTION WILL MAKE EXTENSIVE USE OF GRAVEL INSTEAD OF CONCRETE AND/OR ASPHALT PAVEMENT FOR WALKWAYS AND PARKING AREAS. THE GRAVEL AREAS ARE SHOWN ON THE PLAN AND ALTHOUGH THEY ARE NOT INTENDED AS A DRAINAGE FEATURE, THE VOIDS CONTAINED WITHIN THE GRAVEL WILL SERVE TO ALLOW SITE RUNOFF TO INFILTRATE AND/OR DRAIN LATERALLY BELOW THE SURFACE OF THE GRAVEL WITHOUT SHOWING VISIBLE SIGNS OF STANDING AND/OR FLOWING WATER.

GRADING PLAN

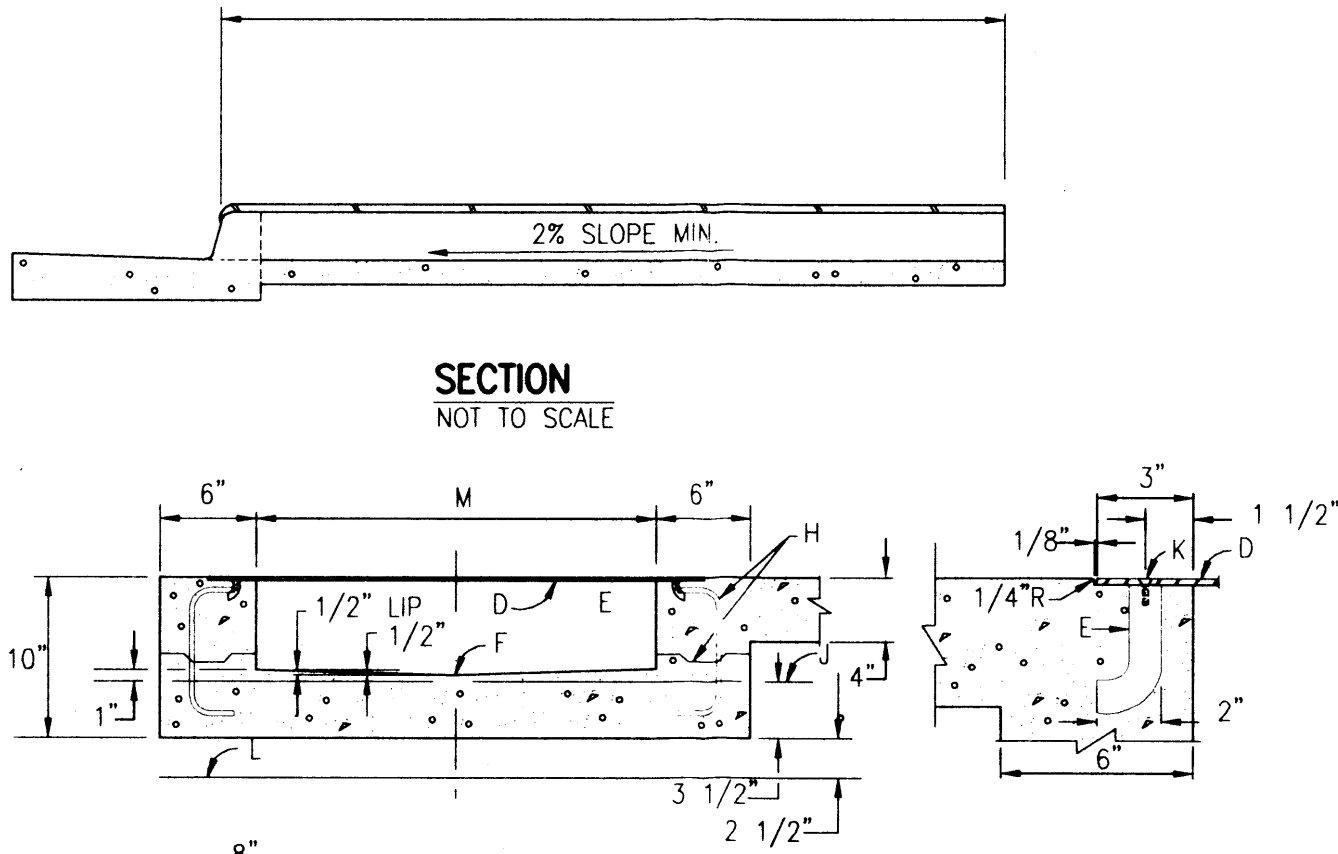
THE GRADING PLAN SHOWS: 1) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'0" INTERVALS, AS SHOWN ON THE A.L.T.A./A.C.S.M. LAND TITLE SURVEY WITH PLAT OF TOPOGRAPHY FOR TRACT B2, CANDELARIA FARM AREA, PREPARED BY HARRIS SURVEYING, INC., DATED APRIL 23, 1997, 2) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS AS SHOWN ON THE PREVIOUSLY REFERENCED SURVEY, 3) THE PROPOSED IMPROVEMENTS INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'0" INTERVALS, 4) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 5) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. THE GRADING PLAN APPEARS ON SHEET A-3 OF THIS SUBMITTAL.

CALCULATIONS

THE CALCULATIONS WHICH APPEAR HEREON ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS SHOWN BY THESE CALCULATIONS, THERE WILL BE A NEGLIGIBLE INCREASE IN DEVELOPED RUNOFF GENERATED BY THIS SITE DURING THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROPOSED IMPROVEMENTS CONSIST OF MODIFICATIONS TO AN EXISTING SITE WITHIN AN INFILL AREA WHICH HAVE A NEGLIGIBLE IMPACT UPON THE OVERALL DRAINAGE CHARACTERISTICS OF THE SITE.

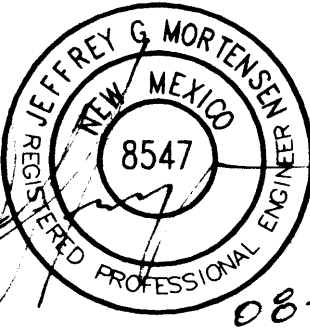
CONCLUSION

THIS PROPOSED GRADING AND DRAINAGE PLAN IS CONSISTENT WITH THE EXISTING DRAINAGE CONDITIONS OF THE SITE. SIGNIFICANT DRAINAGE IMPROVEMENTS ARE NOT POSSIBLE FOR THIS SITE AS THE EXISTING CONDITIONS REPRESENT SIGNIFICANT CONSTRAINTS WHICH LIMIT THE ABILITY TO PROVIDE POSITIVE DRAINAGE. THE PROPOSED IMPROVEMENTS CONSIST OF MODIFICATIONS TO AN EXISTING SITE WITHIN AN INFILL AREA. THE PROPOSED SITE GRADING WILL DIRECT RUNOFF TO LANDSCAPED AREAS AND AWAY FROM THE EXISTING BUILDINGS. SHOULD RUNOFF ACCUMULATE DURING A RAINFALL EVENT, THE PROPOSED SITE GRADING HAS PROVIDED FOR TWO POINTS OF OUTFALL FROM THE INTERNAL AREAS OF THE SITE. ONE OF THESE POINTS IS LOCATED NEAR THE BUS STOP LOCATED AT THE EAST END OF THE SITE ON TRELIS DRIVE N.W. RUNOFF ACCUMULATING IN THIS AREA WILL OUTLET VIA SIDEWALK CULVERT TO PUBLIC RIGHT-OF-WAY. THIS SIDEWALK CULVERT WILL BE CONSTRUCTED UNDER "SO 19" PERMIT AND WILL BE SPECIFIED ON THE SUBSEQUENT GRADING PLAN FOR BUILDING PERMIT APPROVAL. THE SECOND OUTLET LOCATION IS LOCATED SOUTHWEST OF THE LARGEST EXISTING SITE BUILDING. SHOULD RUNOFF ACCUMULATE IN THIS INTERNAL COURTYARD AREA, IT WILL DISCHARGE TO THE RECREATION AREA WHICH LIES AT THE NORTHWEST CORNER OF THE SITE. THIS DEPRESSED AREA CURRENTLY CONTAINS SITE RUNOFF AND WILL CONTINUE TO DO SO IN THE PROPOSED CONDITION. BOTH OF THESE OUTFALL POINTS AND ALL THE GRADES WITHIN THE INTERNAL LANDSCAPED AREAS HAVE BEEN SET BELOW THE MINIMUM FLOOR ELEVATION OF THE LOWEST EXISTING BUILDING AT 4965.73 FEET. THE FINISHED FLOOR ELEVATIONS OF ALL THE PROPOSED BUILDINGS HAVE BEEN SET ABOVE THIS ELEVATION. THIS GRADING AND DRAINAGE PLAN AND THE CONCEPTS PRESENTED HEREIN ARE CONSISTENT WITH THOSE FOR A FLAT GRADING SCHEME WHEREBY EXISTING CONSTRAINTS PRECLUDE CONVENTIONAL DRAINAGE IMPROVEMENTS AND POSITIVE DRAINAGE OF 1% OR BETTER. THIS SITE DIFFERS FROM A FLAT GRADING SCHEME IN THAT THE MINIMAL SITE GRADING WILL ALLOW SITE RUNOFF TO SLOWLY DISCHARGE TO EXISTING PUBLIC RIGHT-OF-WAY, ONCE THE INITIAL ABSTRACTION AND INFILTRATION OF THE SITE HAS BEEN EXCEEDED. THERE ARE NO DESIGNATED RETENTION AREAS CREATED BY THIS PLAN. THERE ARE SOME AREAS WHICH ARE ESSENTIALLY FLAT AND EXHIBIT VERY LITTLE FALL, HOWEVER, RUNOFF CANNOT ACCUMULATE IN THESE AREAS WITHOUT DISCHARGING VIA THE PREVIOUSLY MENTIONED DISCHARGE POINTS. THIS PLAN THEREFORE COMPLIES WITH DRAINAGE ORDINANCES WHICH REQUIRE OUTFALL TO PUBLIC RIGHT-OF-WAY, AND PRECLUDE RETENTION PONDING. NO VARIANCES ARE REQUESTED IN ASSOCIATION WITH THIS SUBMITTAL. RETAINING A DRAINAGE EASEMENT WILL NOT BE REQUIRED IN CONJUNCTION WITH THE DECKER ROAD N.W. VACATION REQUEST BECAUSE THERE ARE NO PROPERTIES, OTHER THAN THE ALL-FAITHS HOME, WHICH DRAIN TO THIS EXISTING PARCEL AND FLOWS DO NOT ENTER FROM TRELIS DRIVE N.W.



- CONSTRUCTION NOTES:**
- JOIN NEAREST SCORE LINE OR WEAKENED PLANE JOINT, PLACE 1/2" EXPANSION JOINT MATERIAL.
 - SIDEWALK OR SETBACK, (VARIABLE).
 - 3" RADIUS, (TYPICAL).
 - 3/8" CHECKERED STEEL PLATE.
 - ROD ANCHOR 1" x 5"
 - "V" INVERT
 - SIDEWALK GRADE
 - DOWEL AND JOINT, (OPTIONAL).
 - GUTTER FLOWLINE ELEV.
 - 3/8" x 1" F.H. C'SUNK STAINLESS STEEL MACHINE SCREW.
 - BOTTOM OF GUTTER
 - DRAIN WIDTH, 24" MAX. 12" MIN.
 - SLOPE 1/4" PER FT. MIN.

TYPICAL SIDEWALK CULVERT DETAILS NOT TO SCALE



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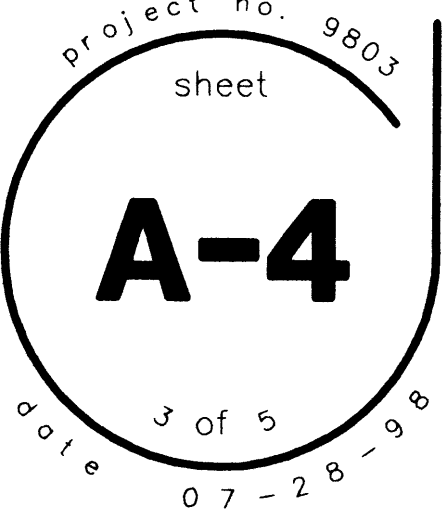
JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE NEW MEXICO 87109
ENGINEERS SURVEYORS (505) 345-4250

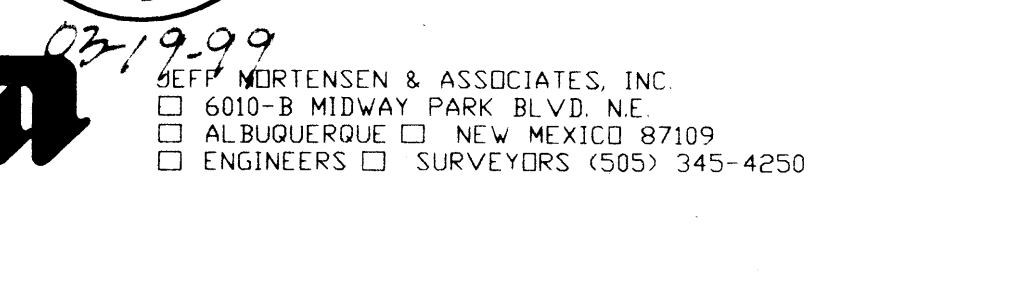
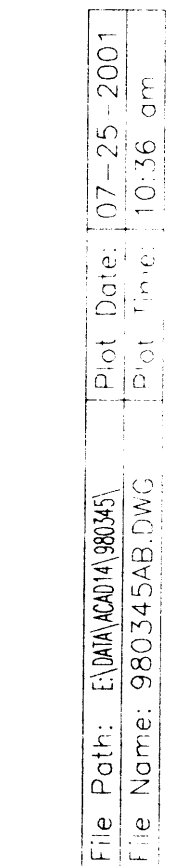
SITE DEVELOPMENT FOR ALL FAITHS RECEIVING HOME

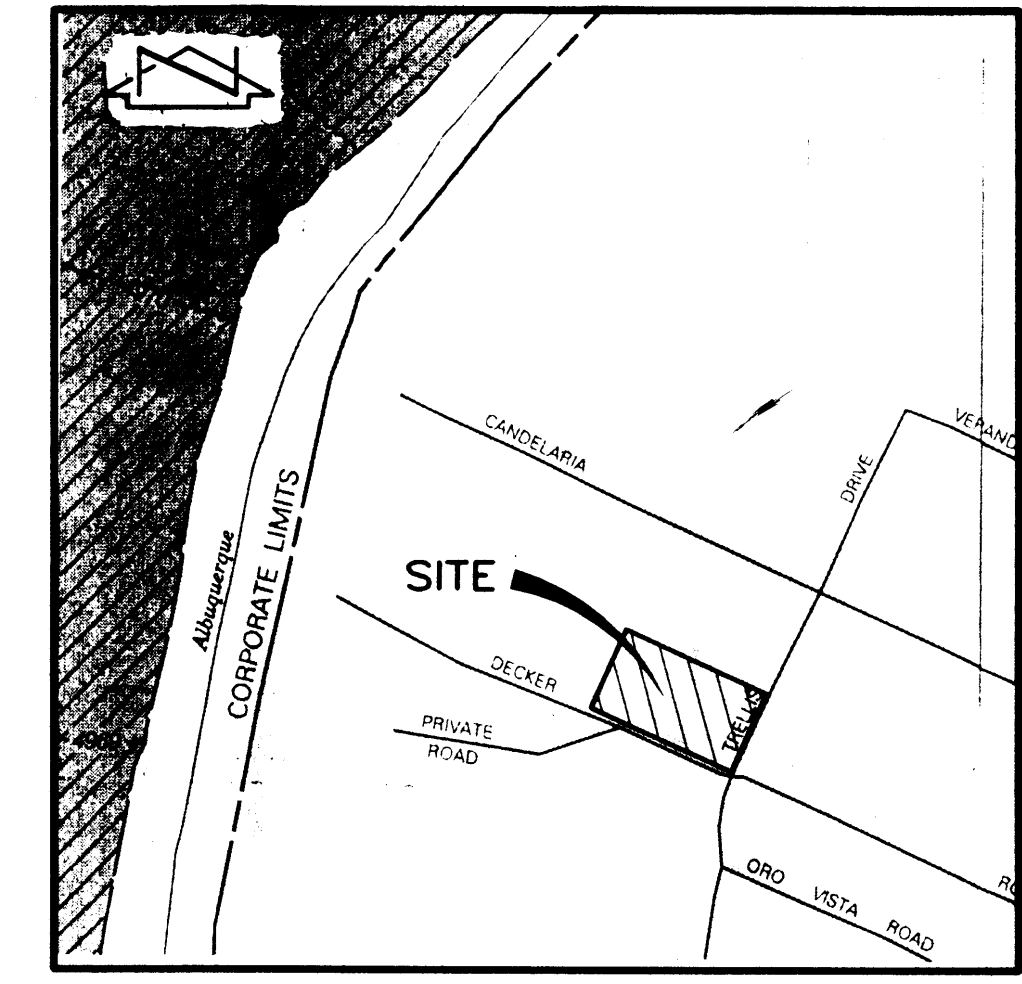
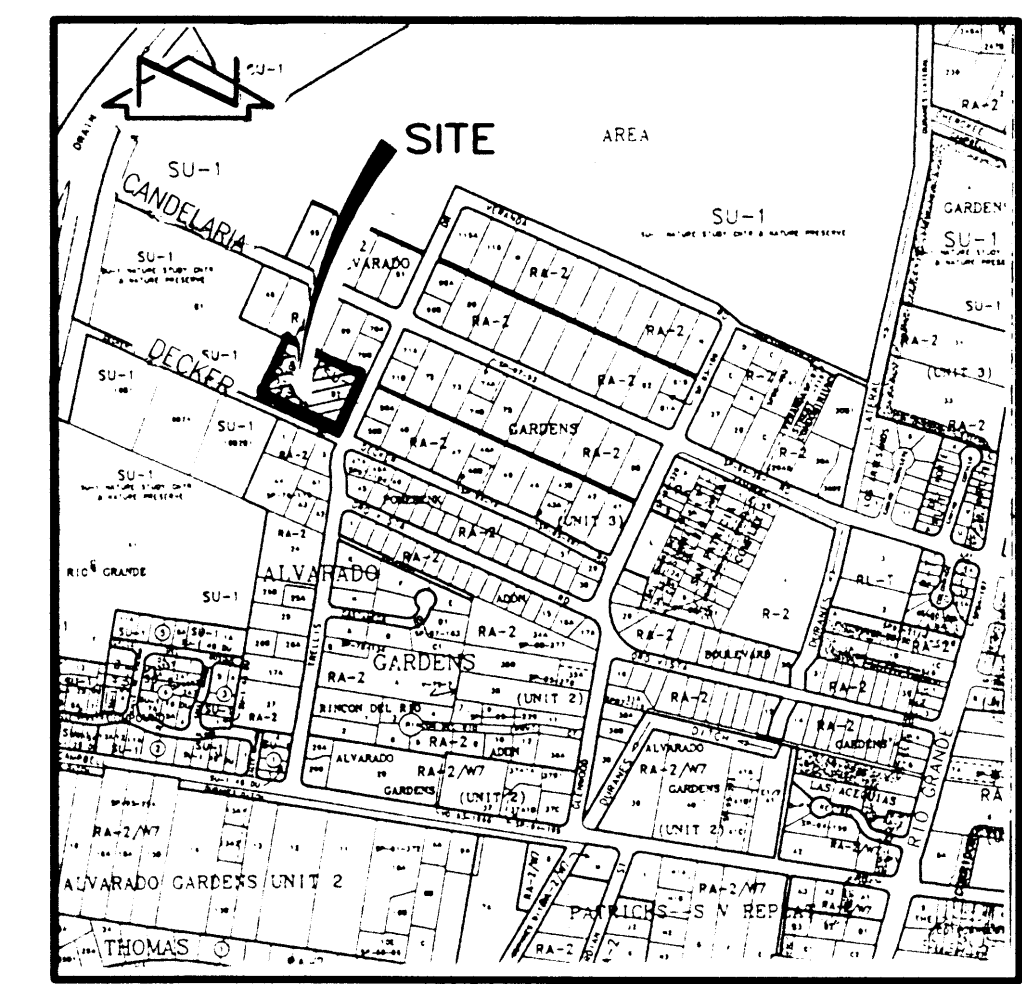
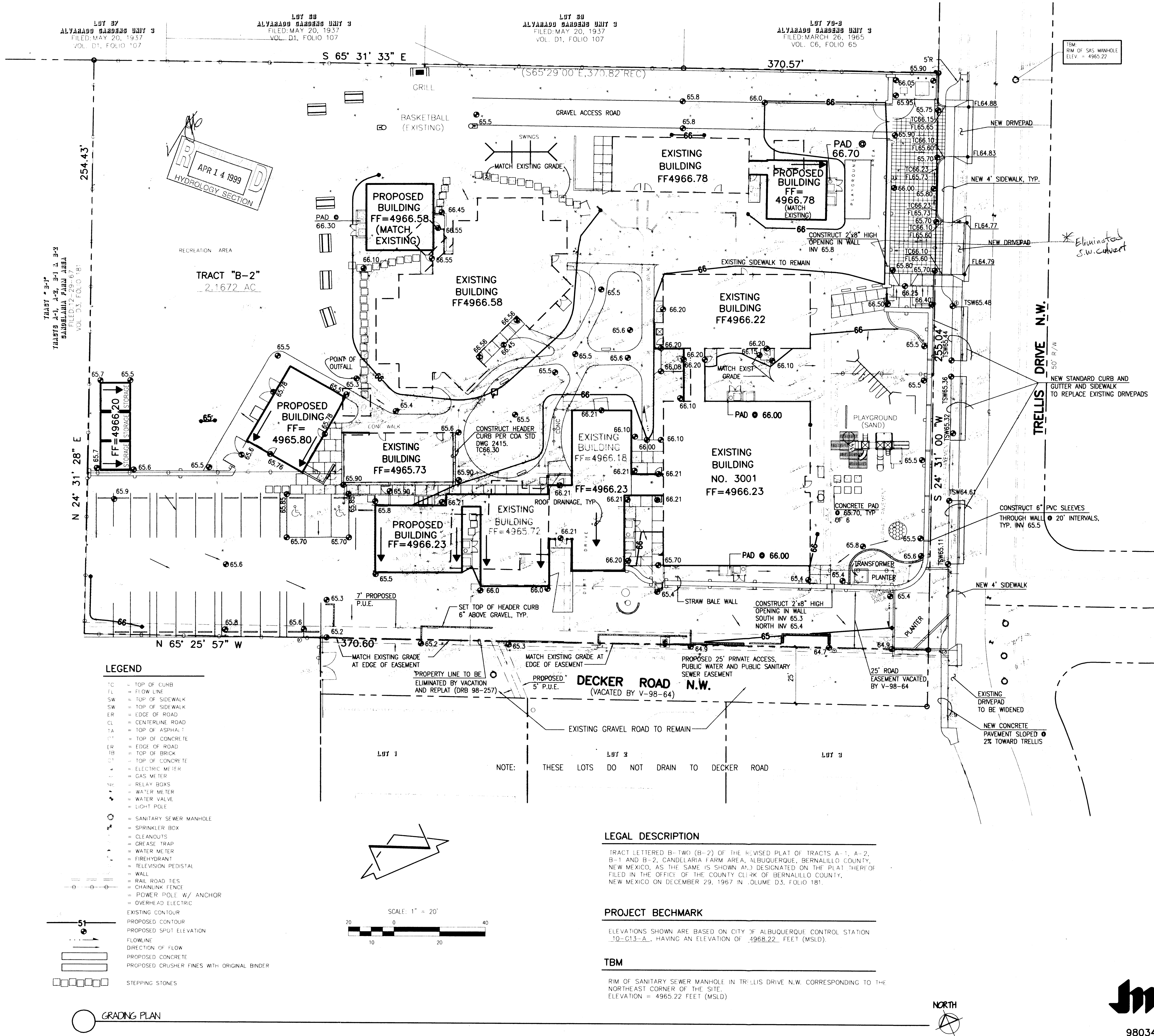
3001 TRELIS DRIVE N.W.

ALBUQUERQUE, NEW MEXICO 87107

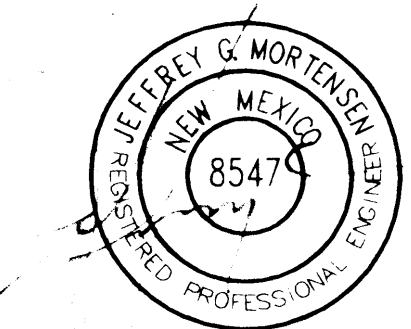
SANDERS ROGERS ARCHITECTS, P.C. 301 GOLD AVENUE S.W. SUITE 202 ALBUQUERQUE N.M. 87102







NOTE:
THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS ARE SHOWN HEREON FOR INFORMATION ONLY. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS FROM "ALTA/A.C.S.M. LAND TITLE SURVEY WITH PLAT OF TOPOGRAPHY FOR TRACT B2, CANDELARIA FARM AREA," PREPARED BY HARRIS SURVEYING, INC. DATED 4/23/97.



6-3-19-99



980343

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS SURVEYORS (505) 345-4250

ALL FAITHS RECEIVING HOME

3001 TRELIS DRIVE N.W.
ALBUQUERQUE, NEW MEXICO 87107

SANDERS ROGERS ARCHITECTS, P.C. 301 GOLD AVENUE S.W. SUITE 202 ALBUQUERQUE N.M. 87102 (505) 247-1168 FAX (505) 247-0262

SITE CHARACTERISTICS CALCULATIONS

1. PRECIPITATION ZONE = 2.35 IN.
2. $P_{6,100} = P_{360} = 2.35$ IN.
3. TOTAL AREA (A_T) = 94,400 SQ. FT. = 2.17 AC
4. EXISTING LAND TREATMENT
- | TREATMENT | AREA (SF/AC) | % |
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2. PEAK DISCHARGE
- $$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$
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DEVELOPED CONDITION

1. VOLUME
- $$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$
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COMPARISON

1. $\Delta V_{100} = 9,990 - 9,910 = 80$ CF (INCREASE)
2. $\Delta Q_{100} = 7.0 - 6.9 = 0.1$ CFS (INCREASE)

DECKER ROAD CALCULATIONS

VACATED AREA: 6,675 SF/0.15 AC
LAND TREATMENT: C (EXISTING AND DEVELOPED)
 $V_{100} = (1.13 / 12)(6,675) = 630$
 $Q_{100} = (3.14)(0.15) = 0.5$ CFS

DRAINAGE PLAN

EXECUTIVE SUMMARY

THIS PLAN REPRESENTS SITE MODIFICATIONS TO THE EXISTING ALL FAITHS RECEIVING HOME. THE PROPOSED IMPROVEMENTS CONSIST OF BUILDING ADDITIONS, NEW BUILDING CONSTRUCTION, PLAYGROUND CONSTRUCTION, AND LANDSCAPING IMPROVEMENTS. AT PRESENT, THE SITE IS DEVELOPED WITH EXISTING BUILDINGS AND ASSOCIATED PAVING AND LANDSCAPING IMPROVEMENTS. THE SURROUNDING AREA IS DEVELOPED RESIDENTIALLY. THE IMPROVEMENTS PROPOSED HEREIN CONSIST OF MODIFICATIONS TO AN EXISTING SITE WITHIN AN INFILL AREA. THIS SUBMITTAL IS FOR BUILDING PERMIT APPROVAL.

INTRODUCTION

A DRAINAGE INFORMATION SHEET IS INCLUDED WITH THIS SUBMITTAL. NO PUBLIC INFRASTRUCTURE IS ANTICIPATED, HENCE AN INFRASTRUCTURE LIST HAS NOT BEEN INCLUDED WITH THIS SUBMITTAL.

REFERENCES

THE FOLLOWING IS A LIST OF RELATED SUBMITTALS FOR THIS SITE. THIS LIST MAY NOT BE INCLUSIVE, HOWEVER, REPRESENTS A SUMMARY OF THOSE PLANS WHICH ARE KNOWN TO THIS PREPARER.

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- VACATION (DECKER ROAD N.W.) AND SKETCH PLAT SUBMITTED 7/09/98 BY JEFF MORTENSEN & ASSOCIATES, INC. (V 98-64, DRB 98-257). VACATION APPROVED 09/29/98.
- APPROVED CONCEPTUAL GRADING AND DRAINAGE PLAN DATED 08/07/98 BY JEFF MORTENSEN & ASSOCIATES, INC. (HYDROLOGY FILE NO. G-12/025).

PROJECT DESCRIPTION

AS SHOWN BY THE VICINITY MAP, THE SITE IS LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF TRELIS DRIVE N.W. AND DECKER ROAD N.W. THE VACATION REQUEST TO VACATE THE PORTION OF DECKER ROAD N.W. WEST OF TRELIS DRIVE N.W. WAS APPROVED 09/29/98. THE PLATTING ACTION TO INCORPORATE THE VACATED PROPERTY IS IN PROGRESS, BY JEFF MORTENSEN & ASSOCIATES, INC. THE SITE IS ZONED SU-1 FOR CHILDREN HOME, AND IS THEREFORE SUBJECT TO SITE PLAN CONTROL. THE CURRENT LEGAL DESCRIPTION IS TRACT B2, CANDELARIA FARM AREA, AS SHOWN BY PANEL 118 OF 825 PUBLISHED BY THE NATIONAL FLOOD INSURANCE PROGRAM FOR BERNALILLO COUNTY, NEW MEXICO, AND INCORPORATED AROUND, DATED SEPTEMBER 20, 1996, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE.

EXISTING CONDITIONS

THE SITE IS CURRENTLY DEVELOPED AS A CHILDREN'S HOME WITH SEVERAL SITE BUILDINGS AND RELATED PLAYGROUND, LANDSCAPING AND PAVING IMPROVEMENTS. THE SITE CONTAINS BOTH GRAVEL AND PAVED PARKING AREAS. THE ACCESS TO THE SITE IS FROM TRELIS DRIVE N.W. TO THE PAVED PARKING, AND FROM DECKER ROAD N.W. TO THE GRAVEL PARKING. TRELIS DRIVE N.W. IS A DEVELOPED PUBLIC STREET WITH ASPHALT PAVEMENT, CURB AND GUTTER AND SIDEWALK. DECKER ROAD N.W. IS CURRENTLY CITY PROPERTY (VIA WARRANTY DEED) AND CONTAINS A GRAVEL ROAD AND PUBLIC WATER AND SANITARY SEWER LINES. AS PREVIOUSLY INDICATED, A VACATION REQUEST WAS APPROVED FOR DECKER ROAD N.W. THE REPLAT IN PROGRESS WILL RETAIN PRIVATE ACCESS AND PUBLIC WATER AND SANITARY SEWER EASEMENTS. RUNOFF WITHIN TRELIS DRIVE N.W. IS BLOCKED FROM ENTERING DECKER ROAD N.W. VIA AN EXISTING DRIVEPAD; RETAINING A PUBLIC DRAINAGE EASEMENT IS NOT WARRANTED.

THE EXISTING SITE DISPLAYS LITTLE TOPOGRAPHIC RELIEF AND LACKS WELL DEFINED DRAINAGE PATTERNS. THERE IS LESS THAN ONE VERTICAL FOOT OF FALL FROM THE NORTHWEST CORNER OF THE SITE TO THE SOUTHEAST CORNER OF THE SITE. IN THE EXISTING CONDITION, IT APPEARS THAT SITE RUNOFF WILL DISCHARGE TO THE FOREMENTIONED PUBLIC STREETS ONLY AFTER EXCEEDING THE INITIAL INFILTRATION AND ABSTRACTION CAPACITIES OF THE EXISTING SITE IMPROVEMENTS, AND THE CAPACITIES OF ANY SHALLOW DEPRESSED AREAS. THE SITE DOES NOT ACCEPT OFFSITE FLOWS FROM THE VACATED DECKER ROAD N.W. OR TRELIS DRIVE N.W. OR FROM THE RESIDENTIALLY DEVELOPED PROPERTIES TO THE NORTH. THE CITY OPEN SPACE LAND TO THE WEST EXHIBITS PARALLEL TOPOGRAPHY AND THEREFORE DOES NOT GENERATE OR CONTRIBUTE OFFSITE FLOWS. THE THREE RESIDENTIAL LOTS WHICH LIE TO THE SOUTH OF THE SITE ACROSS DECKER ROAD N.W. DO NOT CONTRIBUTE RUNOFF TO DECKER ROAD N.W. THEREFORE, DO NOT REQUIRE A PRIVATE DRAINAGE EASEMENT. DECKER ROAD N.W. LACKS A WELL-DEFINED FLOWLINE, HOWEVER, DOES HAVE POSITIVE DRAINAGE TO TRELIS DRIVE N.W. TRELIS DRIVE N.W., THEREFORE, IS THE OUTFALL FOR RUNOFF FROM THIS SITE.

DEVELOPED CONDITIONS

AS PREVIOUSLY MENTIONED, THE PROPOSED IMPROVEMENTS CONSIST OF NEW BUILDING CONSTRUCTION, NEW PLAYGROUND CONSTRUCTION, AND NEW LANDSCAPING IMPROVEMENTS. THE EXISTING PAVED PARKING, LOCATED AT THE EAST END OF THE SITE WILL BE REMOVED AND REPLACED WITH A SAND PLAYGROUND. FOR THE PURPOSES OF DRAINAGE CALCULATIONS, SAND WAS ASSUMED TO BE LAND TREATMENT 'B' IN THIS ANALYSIS. AS SHOWN BY THE CALCULATIONS, THE REMOVAL OF THIS PAVED PARKING AREA OFFSETS THE INTRODUCTION OF IMPERVIOUS AREA CREATED BY THE NEW BUILDING CONSTRUCTION. THE CHANGE IN PEAK RATE AND VOLUME OF RUNOFF GENERATED BY THIS SITE DUE TO THE PROPOSED CONSTRUCTION IS NEGLIGIBLE. RUNOFF FROM THIS SITE WILL CONTINUE TO DRAIN TO TRELIS DRIVE N.W. AS INDICATED IN THE EXISTING CONDITIONS. THE CURRENT SITE DRAINAGE CONDITION REPRESENTS SIGNIFICANT CONSTRAINTS WHICH LIMIT THE ABILITY TO PROVIDE POSITIVE DRAINAGE (SLOPES OF 1% OR GREATER) TO PUBLIC RIGHTS-OF-WAY. IT IS FOR THESE REASONS THAT THE SITE IS SIMILAR IN CONCEPT TO A "FLAT GRADING SCHEME" WHICH EXHIBITS LITTLE TOPOGRAPHIC RELIEF AND DEFINED DRAINAGE PATTERNS DUE TO THE LACK OF AVAILABLE GRADE. THE PROPOSED GRADING, AS SHOWN HEREIN, HAS BEEN ACCOMPLISHED IN A MANNER SUCH THAT ALL FINISHED FLOOR ELEVATIONS WILL BE ABOVE THE PROPOSED AND/OR EXISTING GROUND ELEVATIONS TO PREVENT POTENTIAL FLOODING. THE PROPOSED PLAYGROUND AND LANDSCAPING IMPROVEMENTS WILL BE GRADED SUCH THAT THERE IS NO CHANCE FOR RUNOFF TO ACCUMULATE WITHOUT DISCHARGING THROUGH ONE OF TWO OUTLET LOCATIONS. THESE LOCATIONS ARE IDENTIFIED ON THE GRADING PLAN. FURTHERMORE, THERE WILL BE NUMEROUS PVC SLEEVES CONSTRUCTED IN THE NEW STRAW BALE WALL ALONG THE EAST PROPERTY LINE OF THE SITE WHICH WILL ALLOW ACCUMULATED RUNOFF TO EXIT THE SITE BEFORE IT BECOMES A THREAT TO EXISTING AND/OR PROPOSED BUILDINGS. IN ALL CASES, THE PROPOSED GRADES WILL EITHER PROVIDE FOR FLAT OR GRADUALLY SLOPED AREAS. RUNOFF IN GENERAL WILL BE DIRECTED AWAY FROM ALL BUILDINGS. IN KEEPING WITH THE CHARACTER OF THE SURROUNDING NEIGHBORHOOD, THE PROPOSED CONSTRUCTION WILL MAKE EXTENSIVE USE OF GRAVEL INSTEAD OF CONCRETE AND/OR ASPHALT PAVEMENT FOR WALKWAYS AND PARKING AREAS. THE GRAVEL AREAS ARE SHOWN ON THE PLAN AND ALTHOUGH THEY ARE NOT INTENDED AS A DRAINAGE FEATURE, THE VOIDS CONTAINED WITHIN THE GRAVEL WILL ALLOW SITE RUNOFF TO INFILTRATE AND/OR DRAIN LATERALLY BELOW THE SURFACE OF THE GRAVEL WITHOUT SHOWING VISIBLE SIGNS OF STANDING AND/OR FLOWING WATER.

GRADING PLAN

THE GRADING PLAN SHOWS: 1) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'0" INTERVALS, AS SHOWN ON THE A.L.T.A./A.C.S.M. LAND TITLE SURVEY WITH PLAT OF TOPOGRAPHY FOR TRACT B2, CANDELARIA FARM AREA, PREPARED BY HARRIS SURVEYING, INC., DATED APRIL 23, 1997, 2) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS AS SHOWN ON THE PREVIOUSLY REFERENCED SURVEY, 3) THE PROPOSED IMPROVEMENTS INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'0" INTERVALS, 4) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 5) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. THE GRADING PLAN APPEARS ON SHEET A-3 OF THIS SUBMITTAL.

CALCULATIONS

THE CALCULATIONS WHICH APPEAR HEREON ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS SHOWN BY THESE CALCULATIONS, THERE WILL BE A NEGLIGIBLE INCREASE IN DEVELOPED RUNOFF GENERATED BY THIS SITE DURING THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROPOSED IMPROVEMENTS CONSIST OF MODIFICATIONS TO AN EXISTING SITE WITHIN AN INFILL AREA WHICH HAVE A NEGLIGIBLE IMPACT UPON THE OVERALL DRAINAGE CHARACTERISTICS OF THE SITE.

CONCLUSION

THIS PROPOSED GRADING AND DRAINAGE PLAN IS CONSISTENT WITH THE EXISTING DRAINAGE CONDITIONS OF THE SITE AND WITH THE PREVIOUSLY APPROVED CONCEPTUAL GRADING AND DRAINAGE PLAN. SIGNIFICANT DRAINAGE IMPROVEMENTS ARE NOT POSSIBLE FOR THIS SITE AS THE EXISTING CONDITIONS REPRESENT SIGNIFICANT CONSTRAINTS WHICH LIMIT THE ABILITY TO PROVIDE POSITIVE DRAINAGE. THE PROPOSED IMPROVEMENTS CONSIST OF MODIFICATIONS TO AN EXISTING SITE WITHIN AN INFILL AREA. THE PROPOSED SITE GRADING WILL DIRECT RUNOFF TO LANDSCAPED AREAS AND AWAY FROM THE EXISTING BUILDINGS. SHOULD RUNOFF ACCUMULATE DURING A RAINFALL EVENT, THE PROPOSED SITE GRADING HAS PROVIDED FOR TWO POINTS OF OUTFALL FROM THE INTERNAL AREAS OF THE SITE. ONE OF THESE POINTS IS LOCATED NEAR THE BUS STOP LOCATED AT THE EAST END OF THE SITE ON TRELIS DRIVE N.W. RUNOFF ACCUMULATING IN THIS AREA WILL OUTLET VIA WALL OPENING TO PUBLIC RIGHT-OF-WAY. THE SECOND OUTLET LOCATION IS LOCATED SOUTHWEST OF THE LARGEST EXISTING SITE BUILDING. SHOULD RUNOFF ACCUMULATE IN THIS INTERNAL COURTYARD AREA, IT WILL DISCHARGE TO THE RECREATION AREA WHICH LIES AT THE NORTHWEST CORNER OF THE SITE. THIS DEPRESSED AREA CURRENTLY CONTAINS SITE RUNOFF AND WILL CONTINUE TO DO SO IN THE PROPOSED CONDITION. BOTH OF THESE OUTFALL POINTS AND ALL THE GRADES WITHIN THE INTERNAL LANDSCAPED AREAS HAVE BEEN SET BELOW THE MINIMUM FLOOR ELEVATION OF THE LOWEST EXISTING BUILDING AT 4965.73 FEET. THE FINISHED FLOOR ELEVATIONS OF ALL THE PROPOSED BUILDINGS HAVE BEEN SET ABOVE THIS ELEVATION. THIS GRADING AND DRAINAGE PLAN AND THE CONCEPTS PRESENTED HEREIN ARE CONSISTENT WITH THOSE FOR A FLAT GRADING SCHEME WHEREBY EXISTING CONSTRAINTS PRECLUDE CONVENTIONAL DRAINAGE IMPROVEMENTS AND POSITIVE DRAINAGE OF 1% OR BETTER. THIS SITE DIFFERS FROM A FLAT GRADING SCHEME IN THAT THE MINIMAL SITE GRADING WILL ALLOW SITE RUNOFF TO SLOWLY DISCHARGE TO EXISTING PUBLIC RIGHT-OF-WAY, ONCE THE INITIAL ABSTRACTION AND INFILTRATION OF THE SITE HAS BEEN EXCEEDED. THERE ARE NO DESIGNATED RETENTION AREAS CREATED BY THIS PLAN. THERE ARE SOME AREAS WHICH ARE ESSENTIALLY FLAT AND EXHIBIT VERY LITTLE FALL, HOWEVER, RUNOFF CANNOT ACCUMULATE IN THESE AREAS WITHOUT DISCHARGING VIA THE PREVIOUSLY MENTIONED DISCHARGE POINTS. THIS PLAN THEREFORE COMPLIES WITH DRAINAGE ORDINANCES WHICH REQUIRE OUTFALL TO PUBLIC RIGHT-OF-WAY, AND PRECLUDE RETENTION PONDING. NO VARIANCES ARE REQUESTED IN ASSOCIATION WITH THIS SUBMITTAL. RETAINING A DRAINAGE EASEMENT WILL NOT BE REQUIRED IN CONJUNCTION WITH THE DECKER ROAD N.W. VACATION REQUEST BECAUSE THERE ARE NO PROPERTIES, OTHER THAN THE ALL-FAITHS HOME, WHICH DRAIN TO THIS EXISTING PARCEL AND FLOWS DO NOT ENTER FROM TRELIS DRIVE N.W. THIS PLAN IS IN CONFORMANCE WITH THE PREVIOUSLY APPROVED CONCEPTUAL GRADING AND DRAINAGE PLAN PREPARED FOR THIS SITE.

CONSTRUCTION NOTES:

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.

EROSION CONTROL MEASURES:

- THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
- THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
- THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.



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