CITY OF GRIDLEY

PUBLIC WORKS CONSTRUCTION STANDARDS

In Accordance with Title 15 Chapter 06 Section 10 of the Gridley Municipal Code and Adopted by Resolution No 50 of the Gridley City Council September 16, 1991

Revised by Resolution No. 2016-R-036 December 19, 2016

Revised by Resolution No 2022-R-043 December 5, 2022

INTRODUCTION

The Public Works Construction Standards are intended to be used in conjunction with the State of California Department of Transportation Standard Specifications, as amended, and all requirements pursuant to the General Construction Permit of the State of California, as amended, for all work.

Earthwork, grading, paving, and concrete work shall conform to the applicable sections of the State Standard Specifications, unless modified by these Construction Standards.

The City of Gridley developed the Public Works Construction Standards (PWCS) to mitigate design constraints as follows:

- Generally level slope grades 1-2%.
- High groundwater table at all times.
- Some unstable soils below the groundwater table.
- Storm drainage outfalls into Reclamation District agricultural drainage channels.

The Public Works Construction Standards will help to provide:

- Accurate establishment of grades, and careful construction practices to maintain the design grades.
- Watertightness of gravity pipelines and structures.
- Adequate construction and safety procedures regarding shoring, bracing, and dewatering of all excavations.
- Building pad elevations established above potential high water elevations, with adequate lot grading to the back of sidewalk.
- Storm drainage detention facilities designed to limit peak flows.

GENERAL DESIGN CRITERIA

GENERAL DESIGN CRITERIA shall apply to the design of all improvements within the City of Gridley which are subject to review by the City Engineer.

DRAWINGS shall be on standard size sheets (8-1/2" x 11", 11" x 17", 17" x 22", 18" x 24", 22' x 34", or 24" x 36") with standard title block. All lettering shall be a minimum of 0.10" or 1/8" or larger to permit photographic reduction.

TITLE SHEETS shall have an index or key map clearly indicating the sheet numbers for all drawings.

DESIGN ENGINEER AS DESIGNER, ARCHITECT, OR REGISTERED ENGINEER shall sign each sheet applicable to the field. Designs for structures and other on and off site improvements which are required by law to be designed by a Registered Engineer or Architect shall be stamped and signed.

SOILS REPORT shall, when required, be signed by a Registered Engineer or Registered Geotechnical Engineer.

REVISIONS TO ORIGINAL DRAWINGS must be notated on the drawing, dated, and Initialed by the Engineer of Record and approved by the City Engineer and the Department of Public Works.

IMPROVEMENTS are to be designed and constructed in accordance with these Public Works Construction Standards.

SUBDIVISIONS shall have improvement drawings showing overall layout of the water, sewer, electrical and gas distribution systems, storm drainage, and streets. Public utility locations shall be shown on the "as-built" plans for all projects and shall be provided to the City at the completion of the project .

PROFILES shall be shown on the improvement drawings for streets and street improvements. Vertical curves shall show all curve data, i.e. length, beginning, ending, P.I., etc. Typical design data shall be shown on all sheets, i.e., elevations, stationing, etc.

SCALE for improvement shall be a minimum of 1" = 40' for the horizontal and 1" = 2' for the vertical. The vertical scale may be changed to 1" = 5', or other appropriate scale where depths are great. For complex plans the scale may be 1" = 20' or larger as necessary for clarity.

IMPROVEMENT PLANS shall be prepared in ink on mylar, unless otherwise approved by the City Engineer and the Department of Public Works.

STREET SURVEY CONTROL, horizontal and vertical, storm drainage, subdivision boundary and lot calculations, shall accompany all submittals for checking and approval by the City Engineer and the Public Works Department.

STORM WATER POLLUTION PREVENTION PLAN shall be provided for each project that requires such under the State of California General Construction Permit for water pollution prevention and the implementation of Best Management Practices, inspections, and reporting to meet the State requirements prepared by and conducted by a Qualified Stormwater Developer (QSD) and Qualified Stormwater Practitioner (QSP).

IMPROVEMENT BONDS shall include a detailed cost estimate, prepared by the Design Engineer, and approved by the City Engineer.

ORIGINAL DRAWINGS shall be revised by the Design Engineer stamped and signed "as-built" to reflect the actual "as-built"conditions, and duplicate or photographic mylar copies shall be furnished to the City prior to final acceptance of the work by the City.

IMPROVEMENT PLANS - REQUIRED CONTENTS

1. Project Title

2. Project Design Credits:
   a. Designer 's Signature Date
   b. Scale
   c. Project Approval Signature

3. Existing pertinent topography, (i.e., street, curb, gutters, storm drains and all drainage facilities, sanitary sewers, water electric, and gas line, trees, creeks, , and other features that will effect design, existing right-of-way (R/W) , property lines, street names.)

4. Profiles of existing improvements and/or ground.

5. Location of proposed improvements:
   a. Right-of-Way (R/W), easements, etc.
   b. Horizontal control points (2 min.) with ties, North arrow, contours
   c. A minimum of 2 benchmarks on City Datum with location, description, elevations. Project stationing (Reading left to right)
   d. Typical sections of work Cross-sections as required Profiles of all improvements

6. Horizontal and Vertical Curves:
   a. Begin Curve (B.C. & B.V.C. or P.V.C.)
   b. End Curve (E.C. & E.V.C.)
   c. Point of lntersection (P.I. & P.V.1.)
   d. Invert Station and Elevations:
   e. All Structures Gravity Pipelines

7. General Design Data Grades
   a. Lengths of design element hydraulic gradient
   b. Energy gradient
   c. Other design data as required

8. Special Notes

9. References to Public Works Construction Standards

10. Drawing Legend

SURVEY MONUMENTATION

SURVEY MONUMENTS

The procedure and practice of all survey work done upon any subdivision shall conform to the accepted standards of the engineering profession.

All monuments shall not be less substantial than a 3/4-inch diameter iron pipe or 5/8-inch diameter steel reinforcing bar, 18 inches long with a brass tag or plastic cap bearing the registration number of the engineer or surveyor who set the monument, and shall be subject to inspection and approval by the City Engineer. "Permanent" monuments shall be set in concrete. Before street improvements are accepted, all monuments disturbed by the improvements shall be reset.

In making the survey for a subdivision, the engineer or surveyor shall set "permanent" monuments at all angle and curve points on the exterior boundaries of the subdivision, in all street intersections, at all angle points of street lines, and at all points of curvature, both simple and compound, of street lines. "Permanent" monuments at street intersections and at angle and curved points of street lines shall be set on street centerlines, unless otherwise directed by the City Engineer; provided, however, that the "permanent" monuments need not be set at intervals of less than 400 feet.

The "permanent" monuments shall be set in the ground upright with the metal marker centered in the concrete, by excavating a six-inch minimum diameter hole two feet below the finished grade and pouring the same full of concrete. When streets are required to be paved, the location of such monument and access thereto shall be given by a suitable concrete or cast-iron sliding sleeve surmounted by a circular cast-iron frame and lid at street surface per standard number G2 of the State Specifications or as modified by the City Engineer. In case the monument is not in a street, the metal marker may be set flush with the existing ground surface.

The engineer or surveyor shall set monuments at all lot corners and at all curve points on lot boundary lines.

There shall be one or more permanent bench marks for each subdivision, of a type approved by the City Engineer and referred to the City Datum, set at each street intersection in the curb return or other location approved by the City Engineer. The bench mark shall be a brass disc two inches ± in diameter, set in concrete.

STREET DESIGN CRITERIA

The design, layout, width, circulation, and other aspects of streets, both public and private, shall conform to the locations shown on the Circulation Element of the General Plan and approved by the City Engineer and the Public Works Department.

The final improvement plans for streets shall show the survey monuments and rights-of-way referenced to existing property corners , width of paving, and all improvements, i.e. sanitary sewer system, storm drain system, concrete curb, concrete gutter. The widths and locations of adjacent streets shall be shown referenced to centerline stationing or monuments on the final improvement plans for streets.

STREET WIDTHS [1]

Class	Lane Width	Right-of-Way (R/W) Width	On-Street Parking Permitted?	Bicycle Lanes Permitted?
Thoroughfares & Arterials				
Arterial	12’	60’-84’	No	No
Industrial streets	14’	84’	Yes – 10’ Both Sides	No
Collectors				
Major collector	11’	50’-60’	No	Yes -- 5’ Both Sides
Minor collector	10’	66’-74’	Yes -- 8’ Both Sides	Yes -- 5’ Both Sides
Local streets	10’	56-64’	Yes -- 8’ Both Sides	No

Notes:

[1] An exception to street width dimensions shall be permitted for incorporating stormwater management features or alternative landscape parkway designs, where the sidewalk and landscaping area is greater than 20 feet.

The width of the roadway shall be measured perpendicular or radial to the centerline. Any exceptions to the above widths must be submitted to, and approved by, the City Engineer and the Public Works Department.

Intersections of arterials, depending on estimated traffic volumes, may require special design. The need for single and double left turn pockets, free right turn lanes, right turn islands, raised medians, etc., shall be investigated.

Where feasible, when streets are improved for only one-half widths, the unimproved half shall drain away from the paved section and shall be provided with an adequate ditch.

Typical street cross-sections shall be based on 8-foot parking lanes, allowed only on minor collector and local streets and 10-foot width for Industrial travel lanes. If an additional 10-foot width is added to the following width of travel lanes, on street parking may be allowed at the discretion of the City Engineer:

Arterial Streets	12’
Major Collector Streets	11’

STREET GRADES

Maximum street grades shall not exceed the following limits:

Arterial Streets	8%
Major, Minor Collector Streets	10%
Local Streets	15%

Minimum street grades shall not be less than 0.25% unless authorized by the City Engineer.

The gradient of a street entering an intersection shall not be more than ADA compliance allowances at the intersection(s).

Vertical curves are required when grade breaks exceed 1.0%. Vertical curves shall be made with parabolic vertical curves determined by minimum stopping sight distance and good engineering practice established by the City Engineer and the Department of Public Works.

STREET IMPROVEMENTS

Concrete curbs and gutters shall conform to these Public Works Construction Standards. The minimum grade for curbs and gutters shall be 0.25 % unless a reduction is authorized by the City Public Works Department. Rolled curb and gutter shall only be permitted in residential areas on local streets which do not have existing vertical curb and gutter. Installation of rolled curb and gutter on streets which have existing vertical curb and gutter must have specific approval by the Director of Public Works or the City Engineer.

Street improvement plans shall show curb and gutter profiles, including profiles for all curb returns and any approved cul-de-sacs. (Cul-de-sacs require specific approval of the Department of Public Works.)

Concrete sidewalk shall conform to the City Public Works Construction Standards, 5-feet or 9.5-feet wide exclusive of curbs (11.5-feet for existing streets), and no less than four inches thickness for public and private sidewalks, and six inches thickness for driveways.

Concrete sidewalks may be either adjacent and contiguous in design and construction to curbs and gutters or a non-contiguous parkway sidewalk. Where existing subdivisions and tracts have separated sidewalks with landscape parkway, sidewalk infill shall conform to the existing design. Expansion joints shall be provided at 20-feet maximum spacing, as required for the curb and gutter.

Curb returns shall be constructed on a curve having a radius equal to that shown below:

Class	(Min.) Curb Return Radius
Local Street Intersections	20’
Cul-de-sac	40'
Minor Collector Streets	25’
Major Collector Streets	30’
Arterial Street Intersections	30'

Curb and gutter shall be carefully constructed to the design lines and grades. The extremely flat grades necessary in the City of Gridley requires particularly careful construction to maintain flowline and lip of gutter grades within 0.02-feet of design grades at all locations.

STREET IMPROVEMENTS

Tops of curbs and lips of gutters shall be straight and uniform, and within 1/8" of a 10-foot long straightedge at all locations on straight sections.

The stringent alignment and grade control necessary for minimum grades requires extreme care in the use of extruding machines to construct curb and gutter, and control shall be carefully checked for alignment and grade immediately before pouring.

Any curb and gutter which fails to meet the alignment and grade requirements shall be removed and replaced at no cost to the City.

SIDEWALK REQUIREMENT

The principal reason for a sidewalk is pedestrian safety. The sidewalk gives the pedestrian a place to walk outside of the vehicular travel lanes. The City's experience has been that graded or graveled areas have not been a satisfactory replacement for sidewalks as property owners' plants, vegetation, landscaping, or fences force people into the street.

Curb and gutter is required to protect the edge of the pavement, to channel storm drainage to collection points, to define the right-of-way for vehicular traffic, to make better use of the City's street sweeping program, and to protect pedestrian sidewalk traffic. Curb and gutter reduces the City's street maintenance costs, establishes reference points for property lines, and shows where underground utilities are stubbed out.

SIDEWALK REQUIREMENT BY PERMIT

Generally, curb, gutter, and sidewalk are required for all new development in the City. Several exceptions to the basic policy will be discussed later. The sidewalk requirement occurs in several areas under City procedures:

BUILDING PERMITS

Pursuant to Section 12 of the Gridley Municipal Code, any person obtaining a building permit to construct a new residence or develop property is required to construct curb, gutter, and sidewalk along all public street frontages adjacent to the lot. In addition, the builder or developer is required to pave between the edge of the existing street and the gutter. In situations where it is not practical to set grades for the improvements, the property owner must sign a "Deferred Improvement Agreement" that essentially provides that curb, gutter, and sidewalk will be installed upon demand by the City. This agreement also amounts to an automatic "yes" vote in any future assessment district for street improvements.

SUBDIVISIONS

It is the policy of the City that sidewalks are required as a condition of approval of any subdivision. For subdivisions by final map, sidewalk is required prior to the recording of the final map. For subdivisions by parcel map, sidewalk is required at the time of development. The map condition requiring sidewalk construction shall be noted on the recorded parcel map.

USE PERMITS, SITE PLAN REVIEWS, AND VARIANCES

Curb, gutter, and sidewalk are also required as a condition of approval of use permits, site plan reviews, and variances. In addition, the developer is also required to pave between the edge of the existing pavement and gutter. Generally the conditions on these applications are more of an information item since most would fall under the building permit requirements.

SIDEWALK REQUIREMENT BY STREET CLASSIFICATION

There is some variation in the sidewalk requirements for property depending upon the street classification. In all cases, curb, gutter, and sidewalk are required. By type of street, sidewalk varies as follows:

Arterial:	5-12 foot sidewalk on both sides of the street.
Major and Minor Collector:	5-12 foot sidewalk on both sides of the street.
Local:	5-6 foot sidewalk on both sides of the street.
Industrial:	4-6 foot sidewalk on one side of the street only.

For all uses within the Downtown Mixed-Use designations in the City, along the Highway 99 corridor, and in new designated Neighborhood Mixed-Use areas, sidewalks shall be a minimum width of 6 feet.

SIDEWALK REQUIRED BY LAND USE

PRIVATE STREETS AND MOBILE HOME PARKS

Private Streets and mobile home parks are treated somewhat different in that curb, gutter, and sidewalk are only required on the public street frontages. Internal roads within the projects are private, thus no sidewalk requirement is made.

STREET TREE WELL LOCATION CRITERIA

The only situations where tree wells for trees are specified are in commercial, mixed-use, or industrial areas where full width commercial sidewalk (curb to property line) is to be constructed. This results in a total sidewalk width of 9-1/2 to 11-1/2-feet, and there is enough room for the construction of a tree well immediately behind the curb and to allow for the passage of pedestrians around the tree. Do not attempt to place tree wells in any sidewalk narrower than 7-1/2-feet. Some of the most common obstacles to pedestrians are signs, utility poles, hydrants, parking meters, and building doors that swing out.

The general guidelines relating to the spacing of trees are that they be located no closer than 25 to 30-feet to intersections, with a spacing between trees most suitable for mature growth, and no tree is to be planted closer than 6-feet to an interior property line or a driveway. The former instance is to clearly indicate to a property owner that the tree is in front of their property and not on a common lot line where adjacent property owners could have conflicting views regarding tree maintenance or removal. Clearance to driveway locations is to insure that the tree does not create a blind spot for motorists attempting to exit the driveway into oncoming traffic.

Regarding the spacing of trees along the streets, a number of considerations are involved in addition to the above mentioned intersection, property lines, and driveways. Power poles, street light standards, fire hydrants, the location of underground utilities and services, the placement of parking meters and stalls along the street, and the architecture of a building itself often dictates when and where a tree is to be located. Do not place a tree immediately next to a parking meter where a person cannot get to the meter or in the middle of a parking stall so that it hinders or obstructs a person from opening a car door to enter or exit a vehicle.

Do not place a tree so close to power poles and street lights that the spread of the tree would interfere with access to the pole by utility companies or obliterates the lighting effect from the street lights, nor so close to a fire hydrant that it hinders the Fire Department' s use of the hydrant.

Do not locate trees adjacent to water meters, nor over utility service lines. Consideration should be given to height clearances for traffic control signs and street sweeper operation in the selection of trees for planting.

Tree locations should be coordinated with building designs to provide shade for energy conservation without obstructing entrances or windows.

All tree wells shall be provided with a root barrier to ensure roots are directed downward.

DRIVEWAY STANDARDS AND CRITERIA

DRIVEWAYS – GENERAL

All driveway approaches in City right-of-way shall be constructed in conformance with these Public Works Construction Standards or as modified for special situations described herein.

1. A residential driveway apron shall be constructed between the curb and the property line with Portland cement concrete per driveway standards.

2. A commercial driveway apron to a parking lot or "drive-in" business shall be constructed between the curb and the property line with portland cement concrete, per driveway standards.

3. An industrial driveway apron shall be constructed between the curb and the property line with an approved Portland cement concrete structural section, based on the amount of truck traffic (Tl) and ability of the soil (R-value) to withstand truck wheel loads.

4. In all cases, it shall be the responsibility of the abutting property owner to maintain the driveway apron in a safe and suitable condition for the traffic to be carried, whether pedestrian or vehicular.

COMMERCIAL - INDUSTRIAL HIGH VOLUME DRIVEWAYS

Commercial and industrial driveways that serve a substantial number of vehicles or trucks shall have dimensions, sight distance, geometrics, spacing, etc., determined by the City Engineer.

ONE-WAY DRIVEWAYS

One-Way entrance or exit driveways shall conform to these Public Works Construction Standards for commercial driveways or as modified by the City Engineer for special situations.

AMOUNT OF FRONTAGE ALLOWED FOR DRIVEWAYS

Not more than 60 percent of the frontage of any parcel may be devoted to driveways.

DRIVEWAY WIDTH "W"

The total width of driveways shall be measured between full height curb.

MINIMUM WIDTH "W"

1. The minimum width of driveways for one and two family residences shall provide for a bottom width of 12 feet, exclusive of the transition to full curb height at both ends.

2. The minimum width of non-residential driveways shall provide for the safe, efficient, and economical movement of traffic and should be approximately 24 feet for two-way streets, exclusive of the transition to full curb height at both ends. This driveway width may be reduced to 16 feet for one-way streets.

MAXIMUM WIDTH ''W''

1. The maximum width of driveways for one and two family residences shall provide for a bottom width of 24 feet, exclusive of the transition to full curb height at both ends.

2. The maximum width of all commercial driveways shall be 35 feet, exclusive of the transition to full curb height at both ends, except this may be increased by the City Engineer where necessary to provide for the safe, efficient, and economical movement of traffic.

3. In the case of a driveway located adjacent to an alley, if approved by the City Engineer. The driveway apron may not be combined with the alley but the total combined width shall not exceed 40 feet.

4. The driveway width may be modified by the City Engineer to facilitate turning movements where curb lanes are used.

DISTANCE BETWEEN DRIVEWAYS

1. The minimum length of full height curb between a driveway and a side property line shall be three (3)feet.

2. The minimum length of full height curb between driveways on adjacent lots shall be six (6) feet unless specific approval of a shorter length is given by the City Engineer.

3. No driveway shall be located closer than six (6) feet from an existing or future alley entrance except as provided elsewhere in these standards.

4. Where two or more driveways are constructed on the same lot, the minimum length of full height curb between driveways shall be 24 feet. Where practical to provide parking, the total length of full height curb between driveways shall be in multiples of 20 feet.

DRIVEWAY GRADE (SLOPE)

The maximum grade for driveways shall be limited to 12.5% or as directed by the City Engineer. Eight percent is a desirable maximum for commercial and industrial driveways.

DRIVEWAY DISTANCES FROM UTILITY OR SAFETY DEVICES

No driveway shall be located closer than five (5) feet from a fire hydrant, traffic signal, street light standard, utility pole, or guy wire.

UTILITY RELOCATION

Relocation of utility company's facilities or other public improvements to accommodate a driveway shall be accomplished without cost to the City.

SIGNAL AND ELECTRICAL CONDUIT

Where traffic signal or highway lighting is planned or anticipated, a minimum of one 2-inch PVC-P&C TC-6 conduit shall be placed under any new driveway apron and extend a minimum of one foot beyond the ends of the driveway. The conduit shall be placed behind, and a minimum of 24 inches below, the top of curb.

REMOVAL OF EXISTING DRIVEWAYS

When driveway construction is to take place on a parcel, any abandoned driveways shall be removed and replaced with standard curb, gutter, and sidewalk concurrently with the new construction and without cost to the City.

MODIFICATION

The above standards may be modified by the City Engineer for hardship conditions or where necessary to provide for the safe and efficient movement of traffic.

INTERSECTIONS

Class	Tangent Distance Required at Street Intersections
Local Street	50'
Collector Street	100'
Arterial Street	Require Special Design

Deviation from the above design standards shall be approved by the City Department of Public Works.

The centerline of streets entering upon opposite sides of any given street shall normally align, or shall be offset by at least 200 feet for local residential streets and 300 feet for all other streets. Local streets shall normally be designed as "T" type intersections.

Cul-De-Sacs: Dead-end streets require special approval by the City Engineer, and if approved shall terminate in a paved turn-around and shall have a 40-foot minimum curb line radius at the

tum-around. If approved, cul-de-sacs shall not exceed 500 feet in length, measured from the centerline of the intersecting street to the center of the cul-de-sac "bulb."

HORIZONTAL CURVES

The radius of curvature in the centerline of the street shall be not less than:

Arterial Streets	650'
Major and Minor Collector Streets	200'
Local Streets	75'

Superelevation Rate: -2% from the center line towards the right-of-way line shall be typical cross slope. Deviation from the typical superelevation rate shall be considered due to gutter drainage run-off, horizontal curve requirements, etc.

STRUCTURAL SECTION:

Structural design of pavement, which includes the structural section to be used, shall be based on soil tests results, the TI (Traffic Index), and standard gravel equivalent calculations according to good engineering practice and shall be approved by the City Public Works Department.

Slopes: Earth slopes in cut or embankment sections shall not be steeper than two feet horizontal to one-foot vertical, unless steeper slopes have been approved by the City Public Works Department based on a soil report.

STREET LIGHTS

Street lights shall be located as directed by the Gridley Electric Department, and shall be 100 Watt High Pressure Sodium Lights or low-emitting diode (LED) lighting fixtures installed on 25-foot tapered steel poles with 8-foot arms, as approved by the City Engineer. Pole bases shall be in accordance with the Standard Details.

COMPACTION DENSITY REQUIREMENTS IN STREETS

To clarify City requirements for the compaction of street subgrade and base materials, the following criteria shall apply:

1. Maximum Density - Optimum moisture relationships (compaction tests), will be determined in accordance with ASTM D 1557, Method C, (dry density).

2. Subgrade shall be:

    a. Compacted to a relative compaction of 92 percent for all soil material (cohesive, clay).

    b. Compacted to a relative compaction of 95 percent for all granular material (non-cohesive, granular soils).

    c. Aggregate base shall be compacted to 95 percent relative compaction.

    d. Asphalt concrete pavement shall be compacted to 95 percent relative compaction (ASTM D 1188 Test Method).

    e. Class A or B backfill for trenches shall be compacted to 95 percent relative compaction. Class C backfill for trenches shall be compacted to 92 percent relative compaction.

3. Compaction test results will be acceptable as meeting the 95 percent requirement if the average of all tests is 95 percent with no individual test lower than 93 percent.

4. Compaction tests will be acceptable as meeting the 92 percent requirement if the average of all tests is 92 percent with no individual test lower than 90 percent.

WATER SYSTEM DESIGN CRITERIA

PIPE MATERIALS FOR MAINS

Ductile Iron Pipe
PVC Pipe - AWWA C900 Cast Iron Dimensions

MINIMUM PIPE SIZES FOR MAINS

6" for looped mains and interconnections 8" for unlooped mains
10" for transmission mains between wells

VALVES shall be resilient wedge gate valves installed in accordance with the standard details. A sufficient number of valves shall be provided to permit isolation of each main, not more than 600 feet in length.

FIRE HYDRANTS shall be dry barrel hydrants, Waterous Pacer WB-67 located as directed by the Fire Chief, and not more than 400 feet apart. Hydrant installation shall be in accordance with the City Standard Details.

SERVICES shall be installed in accordance with the Standard Details. All water services shall be single services, 1" minimum diameter. Backflow prevention devices shall be installed on all services to property with access to water from a private well or separate water service, and on all services to properties with potential contamination sources, as determined by the City Engineer and/or the California State Department of Health Services.

MINIMUM COVER for water mains shall be 30 inches, with 36 inches of cover desirable whenever possible.

CROSS-CONNECTION CONTROL ON FIRE SPRINKLER SYSTEMS

Considerable confusion has arisen regarding the intent and purpose of AB 2503, Chapter 425, Statutes of 1982, which adds Section 13114.7 to the Health and Safety Code. Any regulations implementing the provisions of Section 13114.7 of the Health and Safety Code must be promulgated or approved by the State Fire Marshal in accordance with Section 11342.3 of the Government Code.

Section 13114.7 makes it clear that no backflow prevention devices other than those specified in the Standards of the National Fire Protection Association (NFPA) may be required for Class I and II fire sprinkler systems. Class I automatic fire sprinkler systems are those

systems supplied by public water mains only (i.e., no pumps, tanks or reservoirs, physical connection from other water supplies, and no anti-freeze or other additives of any kind).

Class II systems are the same except that booster pumps, whose sole source of supply is the public water system, may be installed in the connection from the street main.

WATER SYSTEM DESIGN CRITERIA

Automatic fire sprinkler systems which have cross-connections to unapproved sources of water, in addition to being connected to the public water mains, shall have backflow protection as required by American Water Works Association M-14 for Class III, IV, V, and VI fire systems.

All automatic fire sprinkler systems shall be installed in accordance with provisions of NFPA # 13, "Installation of Sprinkler Systems" . All systems shall have a fire department connection as required by NFPA #13, unless waived by the Fire Chief. All Class I and II automatic fire sprinkler systems, as with all fire extinguishing systems, shall be serviced and maintained on a regular basis in accordance with the provisions of Chapter 1.8 (starting with Section 13195) of Part 2 of Division 12 of the Health and Safety Code.

In accordance with NFPA #13, each automatic fire sprinkler system shall have an alarm check valve, or equivalent, which is listed and approved for fire system use. Each fire department connection shall have a listed check valve as required by NFPA #13. Further, the fire department connection shall be attached to the sprinkler system above the alarm check valve assembly and not on the supply side. Class I and II systems connected to public mains only do not require double backflow protection devices. Since Class I and II systems are located on public water mains and fire hydrants, the public mains shall be used for supplementary water except in cases of extreme emergency situations where a fire progresses beyond the design criteria of the system and additional water, either in volume or pressure, is required to control the fire situation.

When such added water is needed, it shall be taken from fire hydrants on the public mains through the appropriate fire department pumper and hose lines. The connection shall not be used to pump water from any source other than the public water system.

Connections to the existing water system shall be made only at locations approved by the City Engineer. A gate valve shall be provided at the point of connection to isolate the new water mains from the existing system. All work related to the connection shall be done by the Contractor with full-time inspection by the Department of Public Works.

Hot tap connections shall be avoided, if possible, and will not be allowed on existing steel pipelines, nor when the diameter of the service line is greater than 2/3 of the diameter of the main. If hot tapping is approved by the City Engineer, the Contractor shall have the tapping sleeve and valve fully installed, thrust blocked, supported, and approved by the City prior to making the hot tap, and the tap shall be the full nominal diameter of the tapping sleeve and

valve.

HYDROSTATIC TESTS

All parts of the entire pipeline installation shall be tested at 100 psi minimum pressure, or a pressure of 50 psi above the maximum working pressure. Tests shall be made in the presence of the City Engineer or his representative.

Before the test, the pipeline shall be sufficiently anchored to withstand the test pressure. During the filling of the line with water, precautions shall be taken to prevent air pockets at high points. Water may be allowed to stand in the line for several hours prior to the test. During the test, which shall be conducted for the time period determined by the City Engineer, but not less than two (2) hours, the leakage shall not exceed 5 gallons per 24 hours per thousand feet of pipe per inch of nominal diameter. Test sections shall be as short as valve configurations permit. If any valved section of pipe shows greater leakage than specified, the Contractor shall locate and repair the leaks and shall retest that section of line at no additional cost to the Owner.

FLUSHING AND STERILIZATION OF COMPLETED MAINS

In general, the methods outlined in AWWA C601 entitled, "Disinfecting Water Mains," should be used as a guide in performing this operation where applicable.

Preliminary flushing of completed lines prior to chlorination shall be accomplished as thoroughly as possible with the water pressure and outlets available. The flushing shall be done after the pressure tests have been made.

Before being placed in service, the entire line shall be chlorinated. Chlorine shall be applied by one of the following methods: Liquid chlorine, gas-water mixture, fed-chlorine gas, or calcium hypochlorite water mixture, unless another method (such as Chlorine "HTH" Tablets) is approved by the City Engineer. The chlorinating agent shall be applied at the beginning of each section adjacent to the feeder connection and shall be injected through a corporation cock, hydrant, or other connection ensuring treatment of the entire line.

Water shall be fed slowly into the line with chlorine applied in amounts to produce a dosage of 40-50 parts per million. Portions of the existing mains which have been connected to a new line or otherwise contaminated by construction shall be included in the system sterilized. A residual of not less than 10 parts per million after 24 hours shall be produced in all parts of the line. During the chlorination process, all valves shall be operated.

If disinfection by chlorine "HTH" tablets is permitted by the City Engineer, the tablets shall be

secured to the top of the pipe with an approved adhesive.

After chlorination, the water shall be flushed from the lines at the extremities until the replacement water tests are equal, chemically and bacteriologically, to those of the permanent water supply.

SANITARY SEWER DESIGN CRITERIA

MAIN LINE SEWERS

Minimum pipe size shall be 8".

Pipe material shall be polyvinyl chloride, or ductile cast iron.

Joints shall be approved ASTM standard flexible gasketed joints for the pipe material used.

Design calculations shall be submitted to verify line size and bedding design, as well as Class or Type of pipe.

Manning "N" values to be used:

PVC N = 0.010
DIP N = 0.012

All dead ends shall have a Standard Rodhole not more than 200 feet from a manhole.

Minimum slopes shall be selected to maintain a minimum velocity of 2 FPS, with the pipe flowing full.

GRADE

The sanitary sewer shall be accurately constructed to the design lines and grades. The extremely flat grades necessary in the City of Gridley require particularly careful construction to maintain invert grades within ±0.02 feet vertically, and ±0.05 feet horizontally.

DESIGN FLOW CRITERIA

Domestic: In residential areas, use 250 gallons per day per "equivalent household unit" for average daily flow. Maximum domestic flows should be based on the ratio of peak to average flows as determined by using a Peak Factor of:

$PF = 2.80 \times Qc\text{-}o.i^{55})$ (Q in MGD)
$PF = 7.72 \times Qc\text{-}o.i^{55})$ (Q in GPM)

Design flows shall be the peak domestic flows plus 200 gallons per acre per day allowance for stormwater inflow and groundwater infiltration.

WATERTIGHTNESS TESTING

Tests for watertightness shall be made in the presence of a City representative. The Contractor shall furnish all labor, materials, tools, and equipment required to make the tests. No testing for final acceptance of the pipeline will be done until the trench has been fully backfilled and acceptably compacted to finish grade or pavement subgrade.

All sections of pipe shall be tested, and tests shall be made from manhole to manhole. The sewer shall be complete with laterals, if any. Exfiltration tests shall be made with air except where the use of water is approved by the City Engineer. Air shall be slowly supplied to the plugged pipeline installation until the internal air pressure reaches 4.0 p.s.i. greater than the average back pressure of any groundwater that may submerge the pipe. At least two minutes shall be allowed for temperature stabilization. The rate of air loss shall then be determined by measuring the time required for the internal pressure to decrease from 3.0 p.s.i. to 2.5 p.s.i. greater than the average backpressure of any groundwater that may submerge the pipe. Pipelines shall be considered acceptable when the time required for the 0.5 p.s.i. pressure drop is greater than:

Test Time (secs.) = 36.3 x Pipe Diameter in inches.
PVC or DIP at 0.0010 cubic feet per minute per square foot of internal pipe surface.

Testing with water may be requested by the Contractor. If approved by the City Engineer, the test shall be performed from manhole to manhole by plugging the sewer pipe at the down-stream manhole and filling the pipe to a level 5-feet above the top of the pipe at the upper manhole, or 5-feet above the groundwater level, whichever is greater. The rate of leakage shall be determined by measuring the amount of water required to maintain the water level at the upper manhole. The test shall be conducted for a period of at least two hours. The City Engineer may, at his discretion, require a longer test period. Leakage shall not be in excess of the rate of 20 gallons per inch of pipe diameter per 1,000 lineal feet of pipe per day.

MANHOLES

Manholes are required:

At changes of slope.
At changes of pipe size.
At changes of direction unless the design, as approved by the City Public Works Department, allows for large radius curves.
Intersections of mains. Maximum spacing of 400 feet.
Ends of lines more than 200 feet in length.

All manholes shall be numbered on the plans.

Precast manhole bases shall have the invert slopes constructed to match the plan grades, without additional drop through the manhole, and shall have "0-Ring" or equivalent joints to the sewer pipe.

Cast-in-place manhole bases shall include waterstops on all plastic pipes cast in the base. The finish of the base shall be smooth, and equivalent to a steel trowel finish.

All manholes shall be tested for leakage by filling with water. Leakage shall not be greater than 0.15 gallons per day per square foot of interior surface area. All visible leaks shall be repaired.

SEWER LATERALS

Pipe Materials:

PVC ABS
Ductile Iron Pipe

Size:

Minimum 4" diameter. Larger diameter laterals may be required by the City Engineer.

Depth:

3' minimum at property line

1' minimum at building service

Slope:

2% preferred, 1% minimum if approved by the City Engineer or Director of Public Works.

Slope designed by Registered Civil Engineer and approved by the City Engineer.

Connections:

All connections shall be made in a method approved and inspected by the City Department of Public Works.

Calder couplings shall not be used, and connections shall be similar and equal to a 12-inch long Romac Style LSS sewer clamp coupling, unless otherwise specifically approved by the

Director of Public Works or the City Engineer.

STORM DRAINAGE DETENTION FACILITIES

DESIGN OBJECTIVE

The peak stormwater discharge flow rate from the gross area of the land development project site, and all tributary public rights-of-way, after full development during a 100-year (1% probability) design storm event of any duration shall not exceed the peak stormwater discharge flow rate from the undeveloped project site and all tributary public rights-of-way, based upon a 100-year (1% probability) design storm event.

Design calculations and drawings shall be prepared by a registered civil engineer to demonstrate that this design objective is fulfilled. Calculations and drawings shall be site-specific for the proposed land development site, and shall be based upon actual construction conditions. (The improvements to be constructed must be hydraulically consistent with the design assumptions presented in the calculations.)

The property owner shall have the design engineer inspect the construction of the storm drainage detention facilities, and the engineer shall provide the City with reproducible "As-Built" plans for the improvements, together with his or her certification that the improvements were constructed in accordance with the approved design and that the completed facility will operate and function in accordance with the engineer's design. The required certification must be approved by the City Engineer and/ or the City Building Official.

DESIGN STORM PARAMETERS

The 100-year (1% probability) design storm events for the development site shall be based upon the rainfall intensity-duration data presented in the Gridley Public Works Construction Standards. The storm drainage detention facility shall have adequate storage capacity for a 100-year (1% probability) design storm event of any duration (not just for the time of concentration for the site) with adequate freeboard, subject to the approval of the City Engineer.

DESIGN TIME OF CONCENTRATION

For the undeveloped site, the overland flow portion of the time of concentration shall be determined with the following overland flow equation (Caltrans Design Manual):

$$t_o = \frac{1.80\,(1.10 - C)\,(L^{0.50})}{S^{0.333}}$$

Where: t_o = Overland flow travel time in minutes.
C = Runoff coefficient used in the Rational Formula.
L = Length of overland flow path in feet.
S = Slope of overland flow path in percent.

For the developed site, the time of concentration shall be a combination of overland flow time, as determined by the above equation, and the flow time in gutters and/or pipes to the point being evaluated. However, the time of concentration need not be less than 10 minutes.

DESIGN RUNOFF COEFFICIENTS

Design runoff coefficients for use in the Rational Formula shall be 11 weighted average 11 values for different surface permeabilities, using values compatible with the following representative values:

Agricultural	0.25
Land Landscaped Areas	0.30
Gravel Walks or Driveways (loose)	0.40
Compacted Aggregate Base	0.80
Asphalt or Concrete Surfaces	0.90
Roof Areas	0.95

Runoff rates used to determine storm runoff detention volumes shall include flows from public areas, including streets, sidewalks, driveways and landscape areas, as well as private areas including buildings, porches, patios, walkways, driveways and landscape areas.

DETENTION FACILITIES OUTFLOW RATES

The outflow rate used to design the detention facility shall be the rate actually flowing from the facility under design conditions. The maximum allowable discharge rate shall only be used when the design calculations demonstrate that this flow rate will be achieved by the facility as constructed.

NOTE: Many computer programs used to calculate required detention volumes assume uniform outflow at the maximum allowable rate. If used, this assumption must be confirmed by the design calculations for the proposed physical construction.

Adequate provisions shall be included in the detention facilities design to accommodate overflows of the detention facilities from storms of greater intensity than the design storm, or for

malfunction of the detention facilities, and for discharge of the water without damaging structures or property.

DETENTION "BASIN" DESIGN FEATURES

Surface impoundments used for storm water detention and/or storage shall have adequate security fencing to control access, while providing adequate clearance for maintenance.

Side slopes of impoundments shall not exceed 2: 1, or the maximum slope recommended by a site-specific soils report, whichever is flatter. Adequate erosion control materials shall be provided to ensure the stability of the banks.

Surface impoundments with a least dimension of the top width greater than twenty feet, as well as impoundments which do not have adequate clearance on the tops of the banks for maintenance equipment, shall include ramps to facilitate equipment access to the bottom of the basin for maintenance.

The basin and all appurtenances shall be designed to minimize standing water which may promote mosquito breeding.

ASSURANCE OF LONG-TERM OPERATION

All storm drainage detention facilities shall be constructed to ensure reliable long-term operation. Facilities serving more than one parcel of land shall be located on easements or rights-of-way dedicated to a public agency. Provision shall be made for the assessment of operation and maintenance fees to the parcels served by the facility to pay the full cost of operating and maintaining the detention facilities. (The estimated cost shall be approved by the City Engineer, and the maximum allowable fee or assessment must be sufficient for public agency operation and maintenance of the facilities in case of default by the designated maintenance authority.) If it is necessary to form a special assessment district to facilitate collection of operation and maintenance costs, the property owner and/or the subdivider proposing the special assessment district will be responsible for formation of the district.

Facilities serving one parcel only shall be located on a public easement or right-of-way, or the property owner shall enter into an agreement with the City (acceptable to the City Attorney) that requires the property owner to maintain the detention facilities in perpetuity. Said agreement shall be recorded, and shall run with the land.

MODIFICATION OF EXISTING DETENTION FACILITIES

The alteration or modification of an existing storm drainage detention facility shall be subject to

the same design requirements as for construction of a new facility.

EXCEPTIONS FROM THESE STORM DRAINAGE DETENTION REQUIREMENTS

Only the following development situations will be exempt from full compliance with the storm drainage detention requirements of the Gridley Public Works Construction Standards.

A. Parcels tributary to existing storm drainage detention facilities, when the proposed project or improvement is consistent with the design parameters used for the design of the detention facilities.

B. Parcels tributary to existing City storm drainage facilities which provide flow restriction and/or detention within the City, and the proposed project or improvement will not increase the peak rate of flow discharged from the City storm drainage system, if approved by the City Engineer.

C. Residentially zoned parcels

    1. Existing undeveloped residential parcels which were legally created before 1990.

    2. Existing developed residential parcels when the proposed improvements will not cumulatively increase the structural coverage by more than 500 square feet from the structural coverage which existed on January 1, 2000.

D. Commercial or Industrially zoned parcels

    1. Alteration, modification, improvement or change that will not increase the computed composite "C" value (runoff coefficient) by more than 5% from the computed composite "C" value for the conditions that existed on the site on January 1, 2000.

STORM DRAIN DESIGN CRITERIA

GENERAL

All drainage design requirements shall be in accordance with the latest Master Drainage Plan for the City of Gridley.

Design calculations and flow maps for all tributary areas shall be submitted in duplicate with improvement plans.

Topographic maps shall have adequate ground elevations and/or contours (maximum interval - 1 foot), adequate to define boundaries and slope of drainage basin.

Each drainage basin to be identified and correlated to calculations for that basin. All data and calculations shall be complete and shall have reasonable clarity.

Diversions of all types shall be in strict accordance with applicable laws.

Placement of fills of any magnitude across an existing drainage course shall incorporate a means by which excess flows not handled by the design drainage system can flow overland via essentially the same course as prior to placing the fill across the drainage course without inundating or damaging any structure.

The following storm drain design criteria and charts shall be used with the rational formula for calculating hydrologic and pipe and/or channel design characteristics, i.e., size, type, slope, velocities and entrance, and outlet structures, etc.

The use of onsite and offsite underground storm drain systems, in addition to standard curb and gutters, shall be required:

To limit inlet spacing to 500 feet maximum. To eliminate valley gutters.

To eliminate a concentrated discharge of drainage into the street.

When the flow of water in the gutter, caused by storm water based on a 10-year storm design criteria, would extend more than eight feet from the face of curb or overtop the curb.

The type of drainage facility shall be selected on the basis of the Master Storm Drainage Plan criteria.

The use of valley gutters on collector streets and arterial streets is not acceptable.

Concentrated drainage shall not be discharged to City Streets unless specifically approved by the City Department of Public Works.

DESIGN CRITERIA

Building pads shall not be inundated during a 100-year frequency storm. Traffic lanes shall not be inundated during a design frequency storm.

All existing streets shall be assumed to be constructed to ultimate standards.

All major drainage channels and natural streams shall be assumed to be constructed to ultimate standards.

Culverts shall be analyzed using a ponded (no velocity) condition upstream unless a definite channel exists or is proposed upstream. Inlet and outlet transition structures shall be provided to minimize entrance and exit losses.

Minimum size of proposed culverts shall be 12-inches in diameter.

Level of development as shown in the current City of Gridley General Plan. Recurrence Interval (Storm Frequency):

1. A frequency of ten years for areas less than forty acres and where the proposed drainage structure will not be placed in a natural or constructed sump. Culverts under moderate fill to pass a ten-year storm without static head, and under high fills to pass a 25-year storm with head; however, no damage due to ponding is to occur.

2. A 25-year frequency for areas larger than 40 acres and less than 160 acres. Culverts under moderate fills on collector and local streets are to pass a 25-year storm without static head, and under high fills to pass a 100-year storm with head; however, no damage due to ponding is to occur.

3. A 100-year frequency for areas larger than 160 acres, or where culverts are to be placed under high fills; where a sump condition exists and damage would result due to ponding and where major streets or a freeway are to be crossed. Culverts to pass 100-year storm with head; however, no damage due to ponding is to occur.

SUMMARY OF STORM FREQUENCY

Drainage Area (Acres)	Design Frequency	Culverts under moderate fills without head	Culverts under high fills with head
0-40	10 yr.	10 yr.	25 yr.
40-160	25 yr.	25 yr.	100 yr.
> 160	100 yr. *	100 yr.	100 yr.

* All major streets or freeways, 100 years with head.

The minimum time of concentration shall be 10 minutes.

Vertical Alignment: Match soffits of different sized pipe (not flow lines). Minimum pipe size is 12" diameter if the City has to maintain.

Drop Inlets: Drop inlets shall be placed at return points upstream from the intersection whenever possible. Maximum spacing of drop inlets or manholes shall be 500 feet.

PIPE MATERIALS

The material for storm drain pipes shall be:

1. Solid-wall PVC pipe with rubber gasket joints, conforming to ASTM D3034 with a minimum SDR of 35.

2. Reinforced concrete pipe with rubber gasket joints, conforming to ASTM C76, Class 3 minimum.

3. High Density Polyethylene Pipe (HDPE), watertight with rubber gasket bell and spigot joints, conforming to AASHTO M294 Type S or AASHTO MP7 with joints conforming to ASTM D3212, and gaskets conforming to ASTM F477. The minimum cover for HDPE pipe shall be one foot to street subgrade.

4. Cast-in-place concrete pipe designed in conformance with the City of Gridley Master Storm Drainage Plan Design Criteria.

The use of cast-in-place concrete pipe shall be subject to the specific approval of the City Engineer, subject to the minimum cover criteria shown below.

GRADE

Storm drain pipelines shall be accurately constructed to the design lines and grades. The extremely flat grades necessary in the City of Gridley require particularly careful construction to maintain invert grades within ±0.02 feet vertically and ± 0.05 feet horizontally.

All storm drains should be designed for a minimum velocity of 2 feet per second, flowing full.

Precast pipes 24" or larger in diameter may be laid on a horizontal curve. The radius of curve shall not be less than 300' unless special pipes with longer lips are used.

D-Load criteria shall be used to design all pipes.

Precast R. C.P. is required in all roadway areas unless top of pipe is more than 36" below sub-grade.

For non-traffic areas (front yard, back yard, etc.) non-reinforced concrete pipe may be allowed.

Poured-in-place pipe cover requirements:

Depth from subgrade to top of pipe (Roadway Area)	Cover
0 - 12"	Not allowed.
12 - 36"	6" reinforced slab with 4" sand over pipe.
36" or more	No special requirement.

Poured-in-place concrete pipe may be laid on a curve as follows:

Pipe I.D. (inches)	Minimum Radius (feet)
24"	50'
30"	50'
36"	50'
42"	65'
48"	80'
54"	100'
60"	120'
72"	130'

VALLEY GUTTERS

Minimum slope across the valley gutter shall be 0.50 % , and grade breaks will not be allowed. A minimum of three elevations will be required.

The difference in elevation between the top of the curb at the midpoint of the return and the flowline of valley gutter at the elephant ear shall not to exceed 1.0 foot.

Do not use a valley gutter if there is a storm drain to which water could be dropped in from above. The gutter is to carry water tributary from not more than 500' of street (or one block) whichever is shorter.

EXISTING IRRIGATION AND DRAINAGE CHANNELS

Existing drainage ditches and channels belonging to the Reclamation Districts and Drainage Districts adjoining the City shall be improved, graded and/or enlarged as necessary to carry the design flows listed in the City of Gridley Master Drainage Plan at the design grade of the channel.

Headwalls and wingwalls shall be provided at each end of pipes or box culverts to minimize entrance and exit losses, and cleanout access structures shall be provided at intervals of 1,000 feet maximum.

The subdivider and/or contractor shall make all necessary downstream drainage improvements in accordance with the Master Drainage Plan sufficient to carry the design flow for a 100-year frequency storm as shown in the Plan without inundating the building pads within the subdivision. Complete, detailed hydraulic calculations prepared by a registered civil engineer shall be submitted to demonstrate compliance with this requirement, and shall be subject to the approval of the City Engineer.

Roadway crossings of existing ditches shall be a reinforced concrete pipe, box culvert, or slab bridge with headwalls and wingwalls, sized to carry the design flow of the ditch, at the design grade of the ditch. All crossings shall be subject to the approval of the City Engineer.

GRIDLEY RAINFALL INTENSITIES

Tc MINS.	1(5) INS./HR.	1(10) INS./HR.	1(25) INS./HR.	1(50) INS./HR.	1(100) INS./HR.	Tc MINS.
10	1.48	1.75	2.16	2.29	2.53	10
11	1.41	1.67	2.06	2.18	2.41	11
12	1.35	1.59	1.97	2.08	2.31	12
13	1.29	1.53	1.89	2.00	2.22	13
14	1.24	1.47	1.82	1.93	2.13	14
15	1.20	1.42	1.76	1.86	2.06	15
16	1.16	1.37	1.70	1.80	1.99	16
17	1.12	1.33	1.65	1.74	1.93	17
18	1.09	1.29	1.60	1.69	1.88	18
19	1.06	1.25	1.56	1.65	1.83	19
20	1.03	1.22	1.52	1.61	1.78	20
21	1.01	1.19	1.48	1.57	1.74	21
22	0.98	1.16	1.45	1.53	1.70	22
23	0.96	1.14	1.41	1.50	1.66	23
24	0.94	1.11	1.38	1.46	1.62	24
25	0.92	1.09	1.36	1.43	1.59	25
26	0.90	1.07	1.33	1.40	1.56	26
27	0.88	1.05	1.30	1.38	1.53	27
28	0.87	1.03	1.28	1.35	1.50	28
29	0.85	1.01	1.26	1.33	1.47	29
30	0.84	0.99	1.24	1.31	1.45	30
31	0.82	0.97	1.21	1.28	1.42	31
32	0.81	0.96	1.20	1.26	1.40	32
33	0.80	0.94	1.18	1.24	1.38	33
34	0.78	0.93	1.16	1.23	1.36	34
35	0.77	0.91	1.14	1.21	1.34	35
36	0.76	0.90	1.13	1.19	1.32	36
37	0.75	0.89	1.11	1.17	1.30	37
38	0.74	0.87	1.09	1.16	1.28	38
39	0.73	0.86	1.08	1.14	1.27	39
40	0.72	0.85	1.07	1.13	1.25	40
41	0.71	0.84	1.05	1.11	1.23	41

Tc MINS.	1(5) INS./HR.	1(10) INS./HR.	1(25) INS./HR.	1(50) INS./HR.	1(100) INS./HR.	Tc MINS.
42	0.70	0.83	1.04	1.10	1.22	42
43	0.69	0.82	1.03	1.09	1.20	43
44	0.68	0.81	1.02	1.07	1.19	44
45	0.68	0.80	1.00	1.06	1.18	45
46	0.67	0.79	0.99	1.05	1.16	46
47	0.66	0.78	0.98	1.04	1.15	47
48	0.65	0.77	0.97	1.03	1.14	48
49	0.65	0.77	0.96	1.02	1.13	49
50	0.64	0.76	0.95	1.01	1.12	50
51	0.63	0.75	0.94	1.00	1.10	51
52	0.63	0.74	0.93	0.99	1.09	52
53	0.62	0.74	0.92	0.98	1.08	53
54	0.62	0.73	0.92	0.97	1.07	54
55	0.61	0.72	0.91	0.96	1.06	55
56	0.60	0.72	0.90	0.95	1.05	56
57	0.60	0.71	0.89	0.94	1.04	57
58	0.59	0.70	0.88	0.93	1.03	58
59	0.59	0.70	0.87	0.92	1.02	59

Tc HRS.	1(5) INS./HR.	1(10) INS./HR.	1(25) INS./HR.	1(50) INS./HR.	1(100) INS./HR.	Tc HRS.
1	0.58	0.69	0.87	0.92	1.02	1
2	0.41	0.48	0.61	0.64	0.71	2
3	0.33	0.39	0.50	0.52	0.58	3
4	0.28	0.34	0.43	0.45	0.50	4
5	0.25	0.30	0.38	0.40	0.45	5
6	0.23	0.27	0.35	0.37	0.41	6
7	0.21	0.25	0.32	0.34	0.38	7
8	0.20	0.23	0.30	0.32	0.35	8
9	0.19	0.22	0.28	0.30	0.33	9
10	0.18	0.21	0.27	0.28	0.31	10
11	0.17	0.20	0.26	0.27	0.30	11
12	0.16	0.19	0.24	0.26	0.29	12
13	0.15	0.18	0.23	0.25	0.27	13
14	0.15	0.17	0.23	0.24	0.26	14
15	0.14	0.17	0.22	0.23	0.26	15
16	0.14	0.16	0.21	0.22	0.25	16
17	0.13	0.16	0.20	0.22	0.24	17
18	0.13	0.15	0.20	0.21	0.23	18
19	0.13	0.15	0.19	0.20	0.23	19
20	0.12	0.15	0.19	0.20	0.22	20
21	0.12	0.14	0.18	0.19	0.22	21
22	0.12	0.14	0.18	0.19	0.21	22
23	0.11	0.14	0.18	0.19	0.21	23
24	0.11	0.13	0.17	0.18	0.20	24

RAINFALL INTENSITY EQUATIONS

$I(5) = 4.9 \times Tc^{-0.52}$

$I(10) = 5.8 \times Tc^{-0.62}$

$I(25) = 7.0 \times Tc^{-0.65}$

$I(50) = 7.4 \times Tc^{-0.65}$

$I(100) = 8.2 \times Tc^{-0.65}$

*****

Tc in Minutes

I in Inches/Hour

ELECTRIC DISTRIBUTION FACILITIES

STANDARDS: All electric distribution equipment to be connected to the Gridley electric distribution system shall conform to the requirements of the National Electric Code (NEC) and General Order No. 95 of the California Public Utilities Commission.

EXTENSIONS OF CITY FACILITIES

GENERAL POLICY: The City of Gridley will extend its electrical system along public roads, streets, and upon private property across, under and in satisfactory easements or rights-of-way that have been dedicated.

System expansion within the boundaries of a subdivision or other development to be served:

CONSTRUCTION BY THE APPLICANT: The applicant shall provide, at no cost to the City, and in accordance with City standards and specifications, all engineering, trenching, backfill, resurfacing, landscaping, conduit, secondary conductors, junction boxes, vaults, equipment pads and subsurface housings required for power distribution within the development. Upon acceptance by the City, the applicant will transfer ownership to the City.

CONSTRUCTION BY THE CITY: After acceptance of the facilities provided by the applicant, the City will furnish and install all transformers, primary conductors, switches, and other equipment required for the system's extension, and the cost thereof will be charged to the applicant.

CONSTRUCTION CHARGES: Charges will be as set forth by resolution of the City Council. Credit will be given for oversizing of facilities to provide for areas beyond the boundary of the development, computed on the basis of the City's costs for materials.

System extension or reinforcement outside the boundaries of a subdivision or other development to be served:

CONSTRUCTION BY CITY: The City will construct the necessary underground facilities to deliver electric power to the development site. Connection to these facilities will be subject to charges in accordance with fees established by resolution of the City Council, entitled "Utility Connection Charges."

CONSTRUCTION BY APPLICANT: Where mutually agreed, all or part of the required system extension may be constructed by the applicant in accordance with the Gridley Public Works Construction Standards.

ELECTRIC DISTRIBUTION FACILITIES

ECONOMIC JUSTIFICATION OF CONSTRUCTION

A system extension or reinforcement required by a subdivision or other development outside the present electric service area will be considered economically justified if the City 's expense and investment in the construction is not greater than 2.0 times the expected gross annual revenue from the subdivision or other development.

If the City Engineer determines that the requested extension is not justified economically, the applicant shall pay as a connection charge, in addition to all other applicable charges, the amount required to reduce the City ' s investment in the construction to 2.0 times the expected annual gross revenue.

The City Engineer 's decision, after consideration of all available facts, will be final.

Extension of the electric distribution system to serve subdivisions or developments will be subject to budgetary considerations and approval by the City Council for any expenditure of City funds not specifically budgeted for.

ELECTRIC SERVICE STANDARDS

SERVICE CONNECTIONS

Only duly authorized employees of the City shall connect or disconnect the customer 's service to the City' s distribution system.

ELECTRIC UTILITY SERVICES

It is the policy of the City of Gridley that all new electrical utility services shall be provided by underground facilities on the customer 's premises. On-site electrical line shall be provided at the customer 's expense and shall meet the City 's specifications. Overhead service will be permitted only when underground construction, in the opinion of the City Engineer, is not feasible.

NUMBER OF SERVICES

Only one service drop or lateral may be extended to a building or other premises to be served, except:

Two or more service laterals may be extended to a single building or premise, provided they enter the building or other structures at points at least 150-feet apart and that all wiring, other than control or metering conductors, supplied by each service is separate from and entirely independent of wiring supplied by any other source.

Two or more sets of service entrance conductors may be extended to a single switch panel for the purpose of providing additional capacity or backup protection.

NUMBER OF SERVICE WEATHERHEADS PER SERVICE DROP

Not more than two service weatherheads may be serviced from a single overhead service drop.

ELECTRIC DISTRIBUTION FACILITIES

NONSTANDARD OR EXCESSIVE CUSTOMER REQUIREMENTS:

If the customer requires nonstandard voltages or excess load and/or transformer capacity because of comparatively large loads of short duration, unusually close voltage regulation, or separate transformers to serve low-revenue loads, the customer shall pay the City the difference in cost of the installation requested by the customer and the City 's standard installation.

PHASE BALANCING

When three-wire, single-phase or three-phase service is supplied, the load must be balanced as nearly as practicable between the two sides or several phases. In no case shall the load on one side be twice as great as the other side.

POWER-FACTOR CORRECTION

In the case of devices having low power factors, the customer shall provide, at his own expense, power-factor corrective equipment to increase the power-factor of any device to not less than 90 percent.

REDUCED-VOLTAGE STARTING

All electric motors larger than 50 HP shall have reduced- voltage starting equipment unless this requirement is specifically waived by the Gridley Electric Department.

ELECTRIC METER LOCATION

All electric meters shall be installed in a location with convenient access for the Gridley Electric Department for reading, inspecting, and testing the meters. All proposed meter locations which are enclosed or restricted must be approved in advance by the Gridley Electric Department.

CUSTOMER ORDER PROCEDURE

ORDERING NEW OR ADDITIONAL SERVICE

LARGE SERVICE REQUESTS

Requests for service to loads of 500 KVA or greater maximum demand must be approved in advance by the Gridley Electric Department.

ALL SERVICE REQUESTS

Submit two copies of the project plot plan with definite load information for commercial and industrial installations. Furnish this information as soon as possible.

ELECTRIC DISTRIBUTION FACILITIES

Submit two copies of load information with building plans submitted to the Department of Public Works.

Point of service will be as determined by the Gridley Electric Department.

All required fees and charges must be paid prior to connection of service or issuance of building permit.

All electrical work on the customer side of the meter must be inspected before it will be energized. Call 846-3631 for an inspection.

Application for service is to be made at the Public Works Office in City Hall, 685 Kentucky Street.

ORDERING TEMPORARY SERVICE

If temporary service is needed at a construction site, the following procedures should be followed:

1. Contact the Public Works Department at 846-3631. After a field check, the temporary service point will be located and a cost estimate prepared.

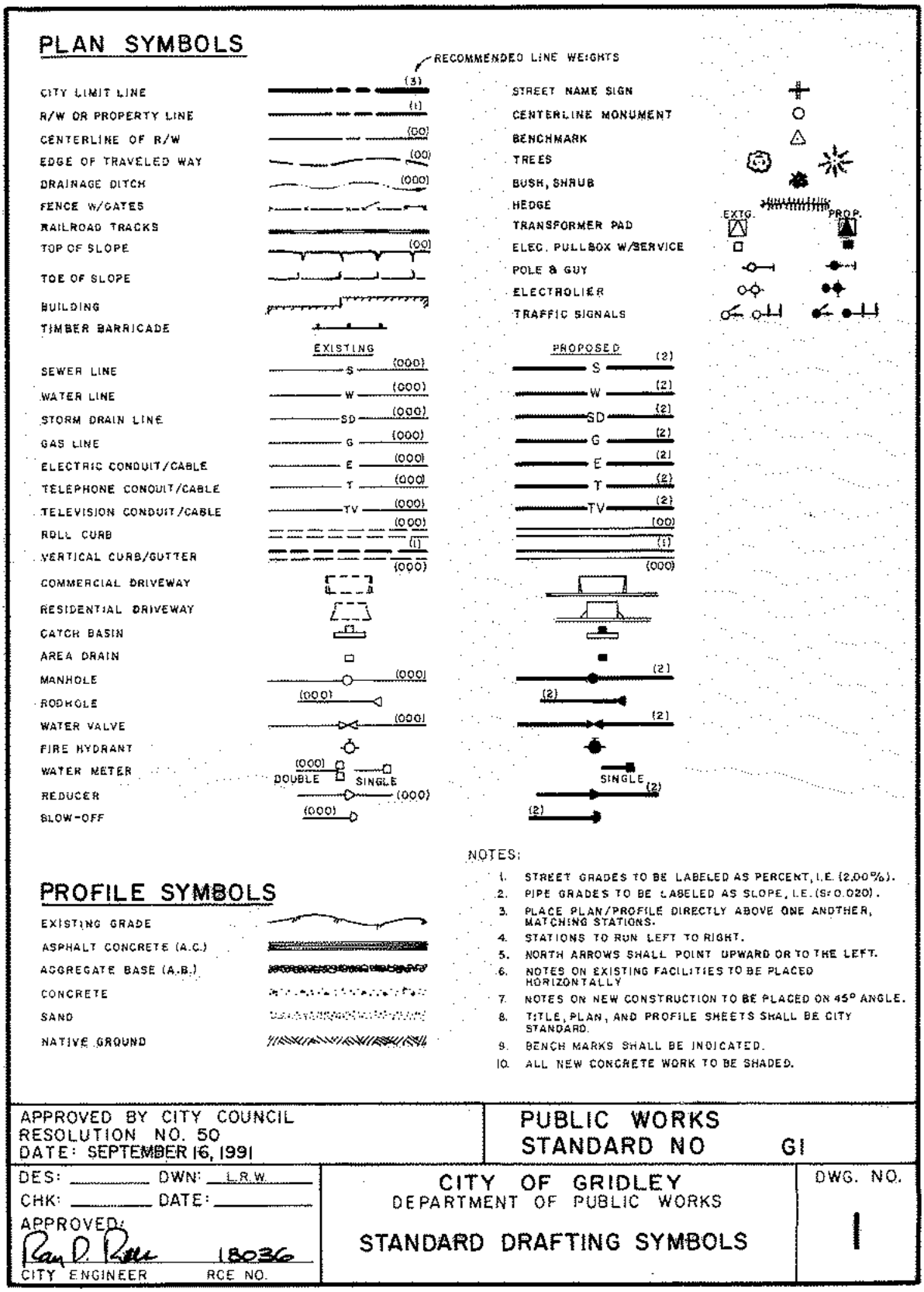
2. Customer must sign a "Customer Job Request Form" to authorize customer billing for up and down charges or other costs necessary to provide temporary service.

3. Application for temporary service is to be made at the Public Works Office.

4. Customer shall furnish and install all necessary service equipment on a temporary pole. The installation shall be inspected before connection is made. Call 846-3631 for inspection.

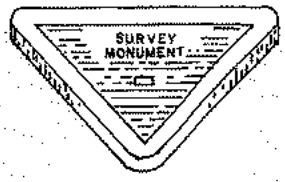
5. If service is overhead, the City will install a service drop to the temporary pole.

6. The customer will be billed actual up and down costs or any temporary installation to the City's distribution system that were required to provide the service.

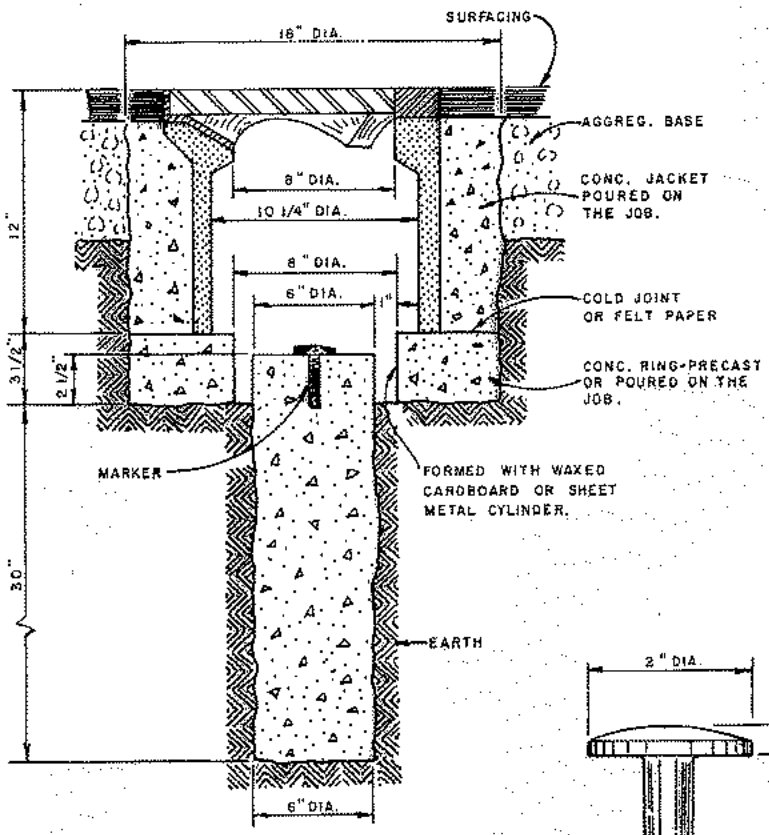

PLAN SYMBOLS
RECOMMENDED LINE WEIGHTS
CITY LIMIT LINE
R/W OR PROPERTY LINE
CENTERLINE OF R/W
EDGE OF TRAVELED WAY
DRAINAGE DITCH
FENCE W/GATES
RAILROAD TRACKS
TOP OF SLOPE
TOE OF SLOPE
BUILDING
TIMBER BARRICADE
EXISTING
SEWER LINE
WATER LINE
STORM DRAIN LINE
GAS LINE
ELECTRIC CONDUIT/CABLE
TELEPHONE CONDUIT/CABLE
TELEVISION CONDUIT/CABLE
ROLL CURB
VERTICAL CURB/GUTTER
COMMERCIAL DRIVEWAY
RESIDENTIAL DRIVEWAY
CATCH BASIN
AREA DRAIN
MANHOLE
RODHOLE
WATER VALVE
FIRE HYDRANT
WATER METER
DOUBLE
SINGLE
REDUCER
BLOW-OFF
STREET NAME SIGN
CENTERLINE MONUMENT
BENCHMARK
TREES
BUSH, SHRUB
HEDGE
TRANSFORMER PAD
ELEC. PULLBOX W/SERVICE
POLE & GUY
ELECTROLIER
TRAFFIC SIGNALS
EXTG.
PROP.
PROPOSED
PROFILE SYMBOLS
EXISTING GRADE
ASPHALT CONCRETE (A.C.)
AGGREGATE BASE (A.B.)
CONCRETE
SAND
NATIVE GROUND
NOTES:
1. STREET GRADES TO BE LABELED AS PERCENT, I.E. (2.00%).
2. PIPE GRADES TO BE LABELED AS SLOPE, I.E. (S=0.020).
3. PLACE PLAN/PROFILE DIRECTLY ABOVE ONE ANOTHER, MATCHING STATIONS.
4. STATIONS TO RUN LEFT TO RIGHT.
5. NORTH ARROWS SHALL POINT UPWARD OR TO THE LEFT.
6. NOTES ON EXISTING FACILITIES TO BE PLACED HORIZONTALLY
7. NOTES ON NEW CONSTRUCTION TO BE PLACED ON 45° ANGLE.
8. TITLE, PLAN, AND PROFILE SHEETS SHALL BE CITY STANDARD.
9. BENCH MARKS SHALL BE INDICATED.
10. ALL NEW CONCRETE WORK TO BE SHADED.
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991
PUBLIC WORKS
STANDARD NO G1
DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
CITY ENGINEER
18036
RCE NO.
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
STANDARD DRAFTING SYMBOLS
DWG. NO.
1

NOTE:
WHEN RESURFACING ROAD
ADD RISER RING BETWEEN
EXISTING BOX & COVER
TO MEET NEW ROAD GRADE.

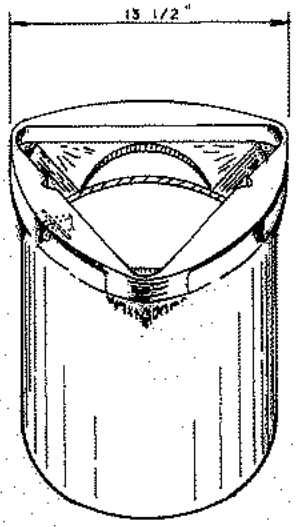
RISER RING



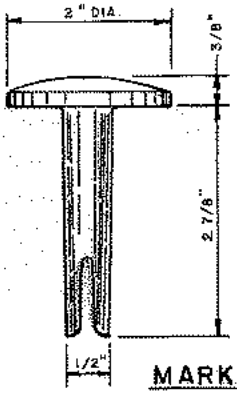
C.I. COVER



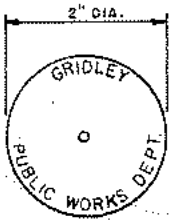
MONUMENT SECTION



MONUMENT

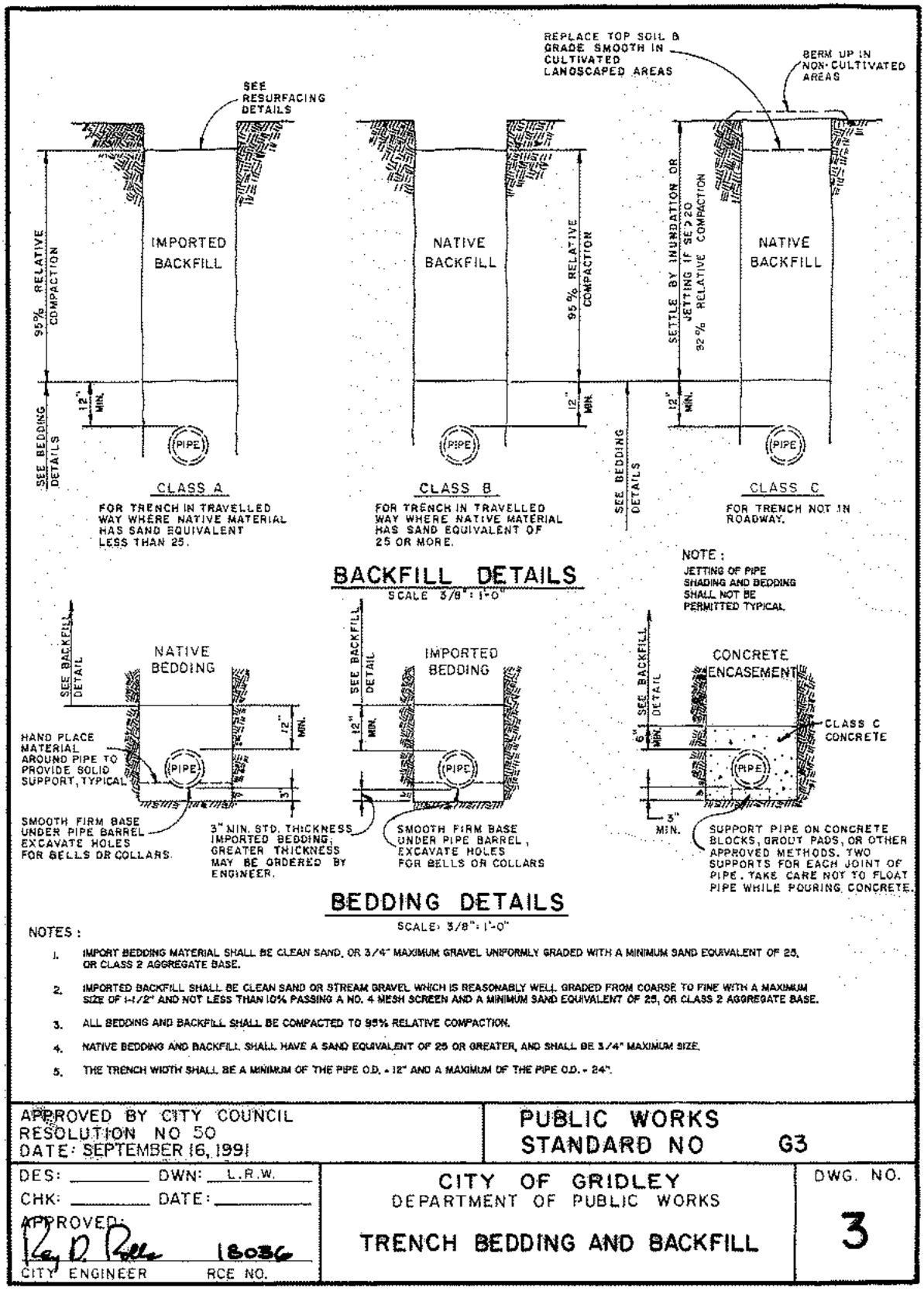


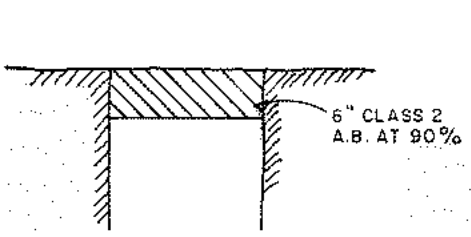
MARKER



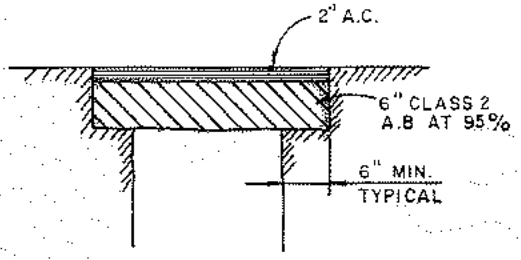
NOTE:
MONUMENT TO BE NO. 4TT
VALVE BOX W/C.I. FACE & COVER
FOR TRAFFIC USE. BROOKS
PRODUCTS INC. OR EQUAL.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO G2
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS SURVEY MONUMENT
	DWG. NO. 2

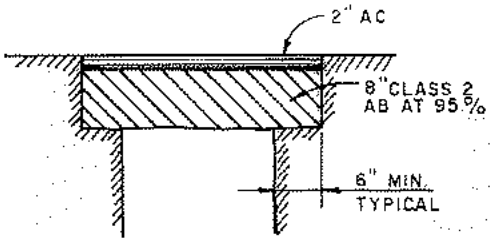

REPLACE TOP SOIL & GRADE SMOOTH IN CULTIVATED LANDSCAPED AREAS
BERM UP IN NON-CULTIVATED AREAS
SEE RESURFACING DETAILS
IMPORTED BACKFILL
NATIVE BACKFILL
NATIVE BACKFILL
95% RELATIVE COMPACTION
95% RELATIVE COMPACTION
SETTLE BY INUNDATION OR JETTING IF SE ≥ 20
90% RELATIVE COMPACTION
12" MIN.
12" MIN.
12" MIN.
SEE BEDDING DETAILS
SEE BEDDING DETAILS
(PIPE)
(PIPE)
(PIPE)
CLASS A
FOR TRENCH IN TRAVELLED WAY WHERE NATIVE MATERIAL HAS SAND EQUIVALENT LESS THAN 25.
CLASS B
FOR TRENCH IN TRAVELLED WAY WHERE NATIVE MATERIAL HAS SAND EQUIVALENT OF 25 OR MORE.
CLASS C
FOR TRENCH NOT IN ROADWAY.
BACKFILL DETAILS
SCALE 3/8" : 1'-0"
NOTE :
JETTING OF PIPE SHADING AND BEDDING SHALL NOT BE PERMITTED TYPICAL
SEE BACKFILL DETAIL
NATIVE BEDDING
HAND PLACE MATERIAL AROUND PIPE TO PROVIDE SOLID SUPPORT, TYPICAL
12" MIN.
3"
SMOOTH FIRM BASE UNDER PIPE BARREL EXCAVATE HOLES FOR BELLS OR COLLARS.
SEE BACKFILL DETAIL
IMPORTED BEDDING
12" MIN.
3" MIN. STD. THICKNESS IMPORTED BEDDING; GREATER THICKNESS MAY BE ORDERED BY ENGINEER.
SMOOTH FIRM BASE UNDER PIPE BARREL, EXCAVATE HOLES FOR BELLS OR COLLARS
SEE BACKFILL DETAIL
CONCRETE ENCASEMENT
6" MIN.
CLASS C CONCRETE
3" MIN.
SUPPORT PIPE ON CONCRETE BLOCKS, GROUT PADS, OR OTHER APPROVED METHODS. TWO SUPPORTS FOR EACH JOINT OF PIPE. TAKE CARE NOT TO FLOAT PIPE WHILE POURING CONCRETE.
BEDDING DETAILS
SCALE: 3/8": 1'-0"
NOTES :
1. IMPORT BEDDING MATERIAL SHALL BE CLEAN SAND, OR 3/4" MAXIMUM GRAVEL UNIFORMLY GRADED WITH A MINIMUM SAND EQUIVALENT OF 25, OR CLASS 2 AGGREGATE BASE.
2. IMPORTED BACKFILL SHALL BE CLEAN SAND OR STREAM GRAVEL WHICH IS REASONABLY WELL GRADED FROM COARSE TO FINE WITH A MAXIMUM SIZE OF 1-1/2" AND NOT LESS THAN 10% PASSING A NO. 4 MESH SCREEN AND A MINIMUM SAND EQUIVALENT OF 25, OR CLASS 2 AGGREGATE BASE.
3. ALL BEDDING AND BACKFILL SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
4. NATIVE BEDDING AND BACKFILL SHALL HAVE A SAND EQUIVALENT OF 25 OR GREATER, AND SHALL BE 3/4" MAXIMUM SIZE.
5. THE TRENCH WIDTH SHALL BE A MINIMUM OF THE PIPE O.D. + 12" AND A MAXIMUM OF THE PIPE O.D. + 24".
APPROVED BY CITY COUNCIL
RESOLUTION NO 50
DATE: SEPTEMBER 16, 1991
PUBLIC WORKS
STANDARD NO G3
DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rollo 18036
CITY ENGINEER RCE NO.
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TRENCH BEDDING AND BACKFILL
DWG. NO.
3



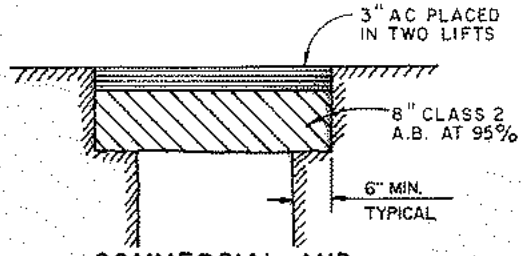
UNPAVED
TRAVELLED WAYS



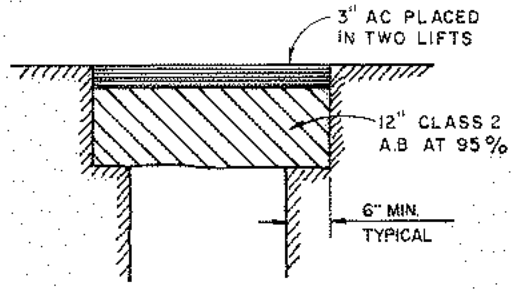
LOCAL STREETS



COLLECTOR STREETS



COMMERCIAL AND
ARTERIAL STREETS

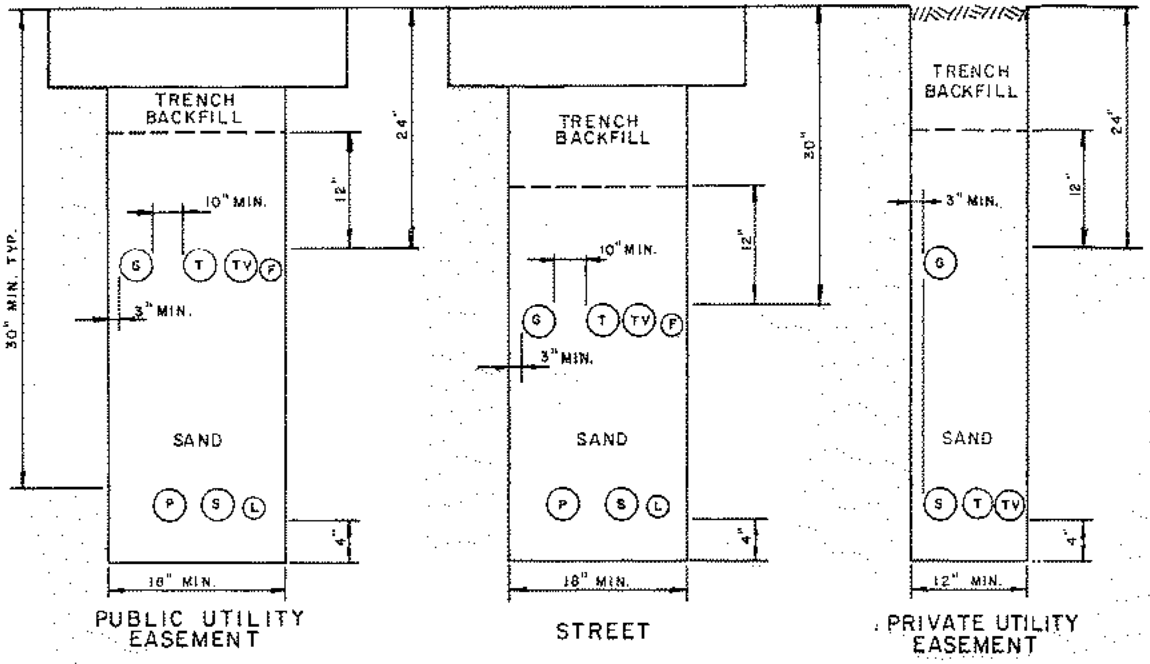


INDUSTRIAL STREETS

NOTES:

1. EXISTING PAVEMENT SHALL BE NEATLY CUT TO A STRAIGHT VERTICAL LINE.
2. AGGREGATE BASE SHALL RECEIVE A "PRIME COAT" OF SC-250 LIQUID ASPHALT AND EXISTING PAVEMENT EDGES SHALL RECEIVE A "TACK COAT" OF SS-1 ASPHALTIC EMULSION BEFORE PAVING.
3. ALL MATERIAL SHALL CONFORM TO THE CITY STANDARD SPECIFICATIONS.
4. ALL ASPHALT TRENCH PATCHES SHALL RECEIVE A FOG SEAL COAT OF SS-1 ASPHALTIC EMULSION.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO G4	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS TRENCH RESURFACING	DWG. NO. 4



JOINT TRENCH INSTALLATIONS

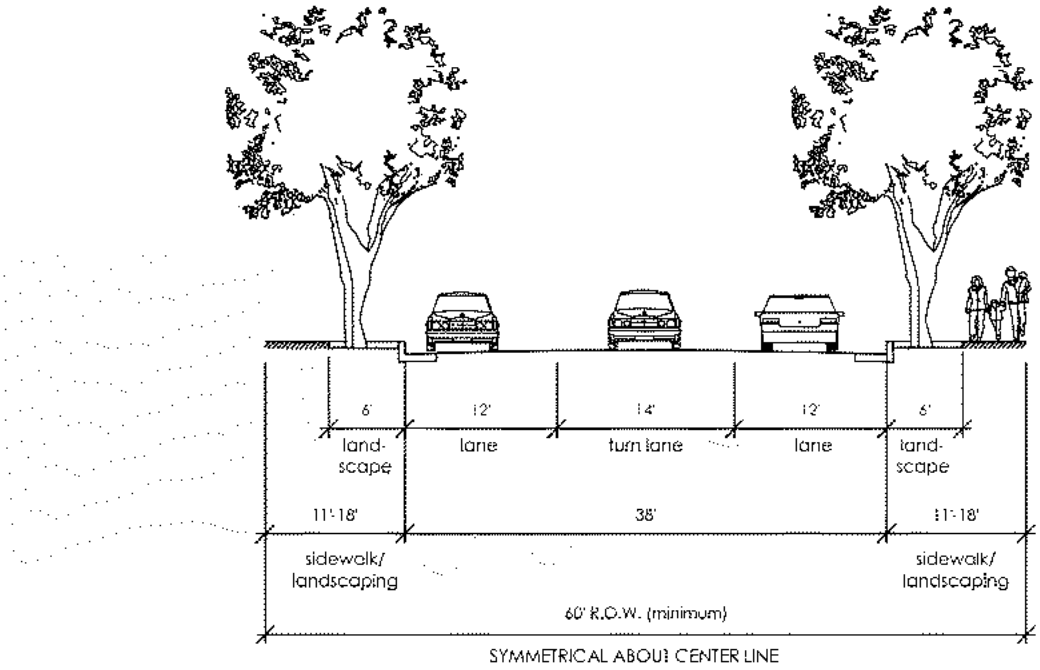
LEGEND

- (G) GAS (PG&E)
- (T) TELEPHONE (PB)
- (TV) CABLE T.V.
- (P) PRIMARY ELECTRIC
- (S) SECONDARY ELECTRIC
- (F) FIRE ALARM
- (L) STREET LIGHT

NOTES

1. BACKFILL IN PARKWAY OR STREET INSTALLATIONS SHALL BE CLASS A OR B AS REQUIRED BY THE PUBLIC WORKS DEPARTMENT.
2. ALL ELECTRIC CONDUCTORS PLACED UNDERGROUND SHALL BE INSTALLED IN APPROVED ELECTRICAL CONDUIT:
   A) PLASTIC CONDUIT SHALL BE NEMA TC-6 PVC (APPROVED FOR DIRECT BURIAL INSTALLATION) (PBC)
   B) ALL CONDUITS INSTALLED SHALL INCLUDE PULL STRINGS.
3. WHERE PRACTICAL, LOCATE GAS AND ELECTRIC SERVICES AT ALTERNATE LOT LINES TO MINIMIZE CONFLICTS.
4. DEPTHS AND SEPARATION SHOWN ARE DESIRABLE MINIMUMS. VARIANCES MAY BE REQUIRED.
5. GAS FACILITIES MUST ADHERE TO GO112A
   A) WHERE 10" SEPARATION CANNOT BE OBTAINED IN AN 18" WIDE TRENCH SEPARATION MAY BE REDUCED TO NOT LESS THAN 6" INSTEAD OF INCREASING THE TRENCH WIDTH
   B) WHERE PRIMARY AND GAS ARE NOT INVOLVED SECONDARY MAY OCCUPY POSITION NORMALLY OCCUPIED BY GAS.
6. AT NO TIME WILL SANITARY SEWER LINES BE ALLOWED IN TRENCH OCCUPIED BY PRIMARY OR SECONDARY.
7. EACH UTILITY COMPANY MAY HAVE ONE OR MORE CONDUITS OR CONDUCTORS IN A TRENCH.
8. DEPTHS TO VARY ACCORDING TO CONDUIT SIZES AND LATERAL INTERFERENCE.
9. ALL CONDUCTORS OR CONDUITS SHALL HAVE 3" MINIMUM CLEARANCE FROM TRENCH SIDEWALLS.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO G5
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Bell 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS JOINT UTILITY TRENCH
	DWG. NO. 5



DEFINITION	A STREET THAT SERVES A LARGE VOLUME OF VEHICULAR TRAFFIC WITH INTERSECTIONS AT GRADE AND GENERALLY HAVING LIMITED DIRECT ACCESS TO ABUTTING PROPERTY, AND ON WHICH GEOMETRIC DESIGN AND TRAFFIC CONTROL MEASURES ARE USED TO EXPEDITE THE SAFE MOVEMENT OF THROUGH TRAFFIC.
ACCESS	INTERSECTIONS AT GRADE WITH LIMITED DIRECT ACCESS TO ABUTTING PROPERTY.
TRAFFIC FEATURES	CHANNELIZATION USED TO CONTROL TURNING MOVEMENTS AT INTERSECTIONS AND AT CRITICAL DRIVEWAYS. TRAFFIC SIGNALS AT MAJOR INTERSECTIONS, PARKING, AND DRIVEWAYS RESTRICTED, AS NECESSARY.

STRUCTURAL DESIGN SECTION
(MINIMUM)

AGGREGATE BASE
PRIME COAT
ASPHALT CONCRETE
FOG SEAL

APPROVED BY: RESOLUTION NO. DATE:	PUBLIC WORKS STANDARD NO.

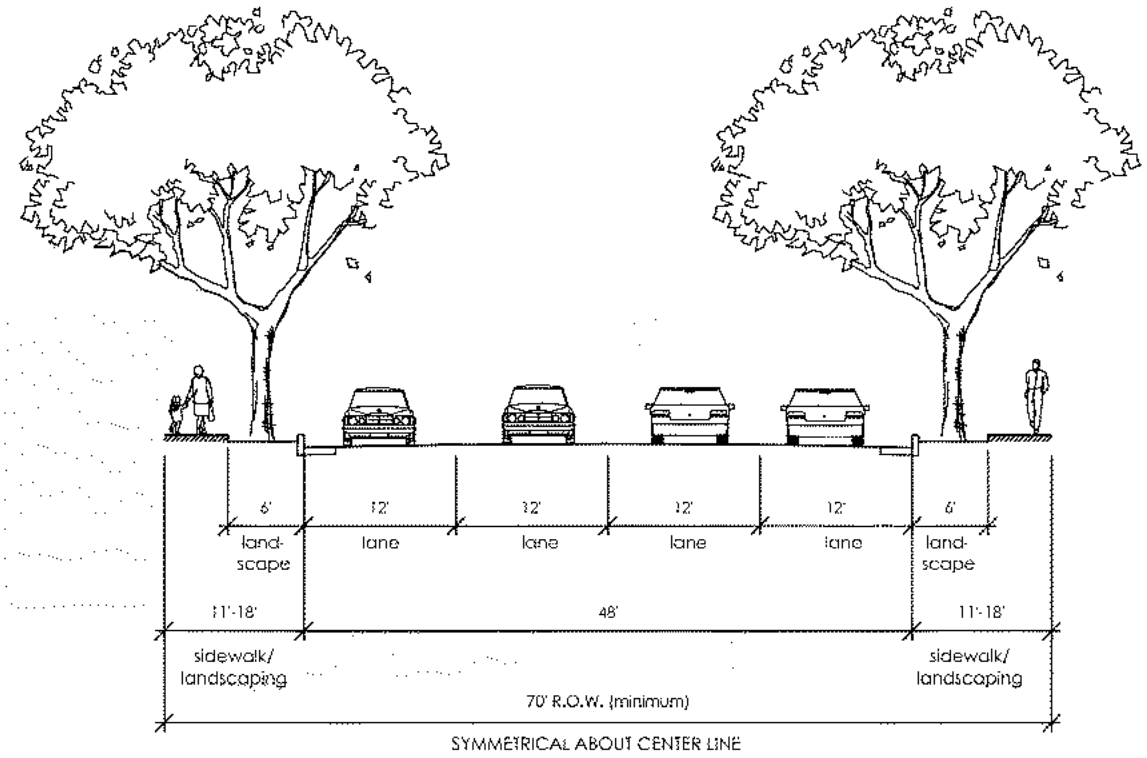
CITY OF GRIDLEY

DEPARTMENT OF PUBLIC WORKS

2-LANE ARTERIAL STREET

DWG. NO.

6A

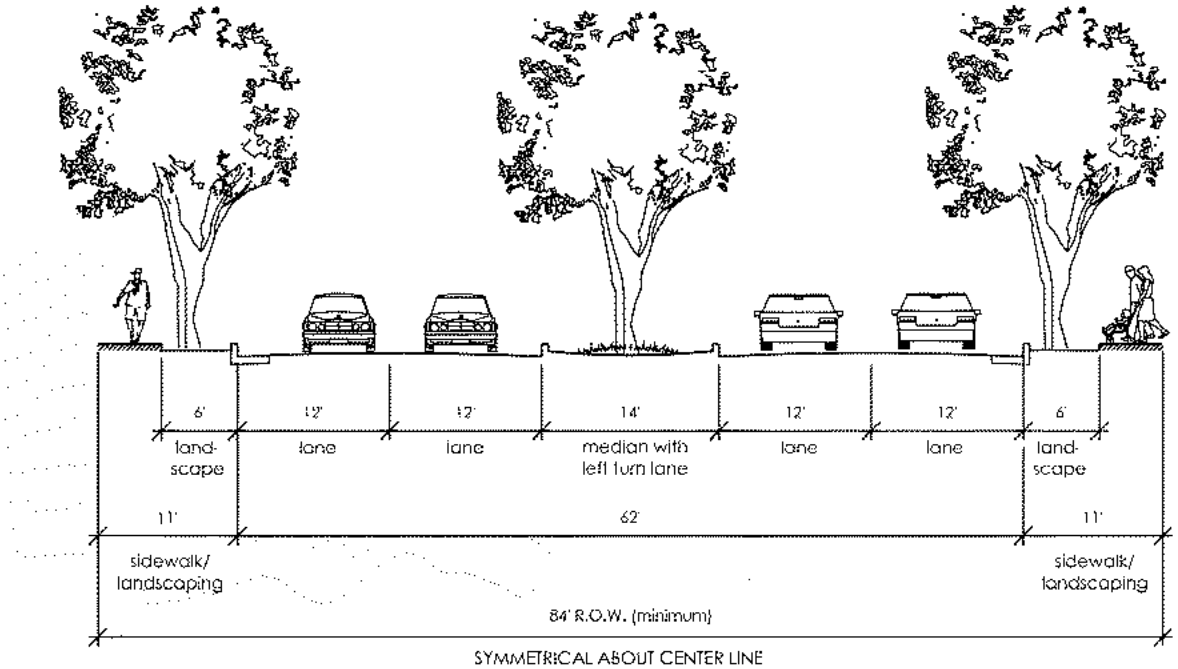


DEFINITION	A STREET THAT SERVES A LARGE VOLUME OF VEHICULAR TRAFFIC WITH INTERSECTIONS AT GRADE AND GENERALLY HAVING LIMITED DIRECT ACCESS TO ABUTTING PROPERTY, AND ON WHICH GEOMETRIC DESIGN AND TRAFFIC CONTROL MEASURES ARE USED TO EXPEDITE THE SAFE MOVEMENT OF THROUGH TRAFFIC.
ACCESS	INTERSECTIONS AT GRADE WITH LIMITED DIRECT ACCESS TO ABUTTING PROPERTY.
TRAFFIC FEATURES	CHANNELIZATION USED TO CONTROL TURNING MOVEMENTS AT INTERSECTIONS AND AT CRITICAL DRIVEWAYS. TRAFFIC SIGNALS AT MAJOR INTERSECTIONS. PARKING AND DRIVEWAYS RESTRICTED AS NECESSARY.

STRUCTURAL DESIGN SECTION
(MINIMUM)

AGGREGATE BASE
PRIME COAT
ASPHALT CONCRETE
FOG SEAL

APPROVED BY: RESOLUTION NO. DATE:	PUBLIC WORKS STANDARD NO.	
	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS 4-LANE ARTERIAL STREET (opt 1)	DWG. NO. **6B**



SYMMETRICAL ABOUT CENTER LINE

DEFINITION	A STREET THAT SERVES A LARGE VOLUME OF VEHICULAR TRAFFIC WITH INTERSECTIONS AT GRADE AND GENERALLY HAVING LIMITED DIRECT ACCESS TO ABUTTING PROPERTY, AND ON WHICH GEOMETRIC DESIGN AND TRAFFIC CONTROL MEASURES ARE USED TO EXPEDITE THE SAFE MOVEMENT OF THROUGH TRAFFIC.
ACCESS	INTERSECTIONS AT GRADE WITH LIMITED DIRECT ACCESS TO ABUTTING PROPERTY.
TRAFFIC FEATURES	CHANNELIZATION USED TO CONTROL TURNING MOVEMENTS AT INTERSECTIONS AND AT CRITICAL DRIVEWAYS. TRAFFIC SIGNALS AT MAJOR INTERSECTIONS. PARKING, AND DRIVEWAYS RESTRICTED. AS NECESSARY.

STRUCTURAL DESIGN SECTION
(MINIMUM)

AGGREGATE BASE
PRIME COAT
ASPHALT CONCRETE
FOG SEAL

APPROVED BY: RESOLUTION NO. DATE:	PUBLIC WORKS STANDARD NO.

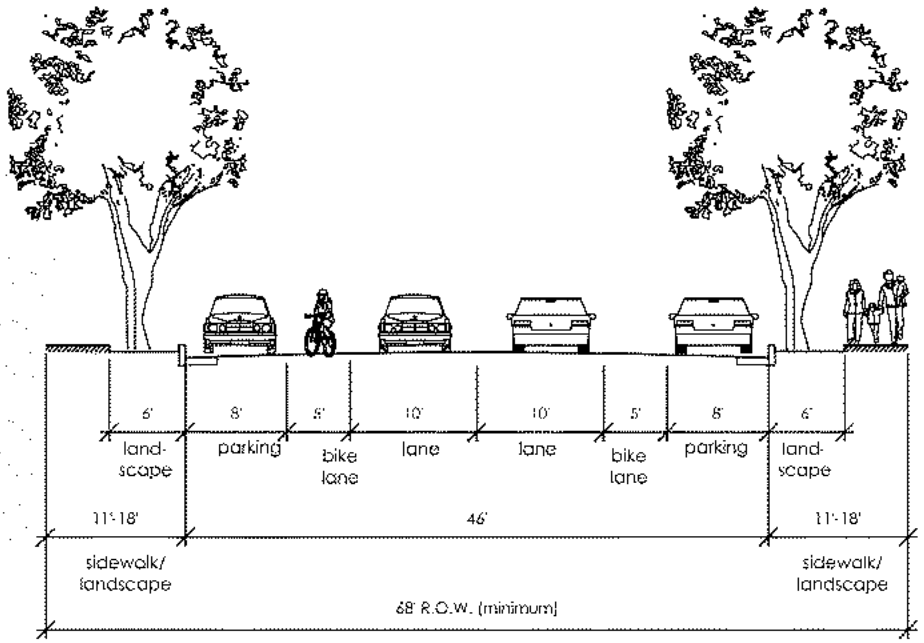
CITY OF GRIDLEY

DEPARTMENT OF PUBLIC WORKS

4-LANE ARTERIAL STREET (opt 2)

DWG. NO.

6C



SYMMETRICAL ABOUT CENTER LINE

DEFINITION	A STREET THAT SERVES ABUTTING PROPERTY AND CARRIES TRAFFIC TO THE ARTERIALS.
ACCESS	INTERSECTIONS AT GRADE WITH DIRECT ACCESS TO ABUTTING PROPERTY.
TRAFFIC FEATURES	TRAFFIC SIGNALS, PARKING RESTRICTIONS, AND OTHER CONTROL MEASURES, AS WARRANTED.

STRUCTURAL DESIGN SECTION
(MINIMUM)

AGGREGATE BASE
PRIME COAT
ASPHALT CONCRETE
FOG SEAL

APPROVED BY: RESOLUTION NO. DATE:	PUBLIC WORKS STANDARD NO.

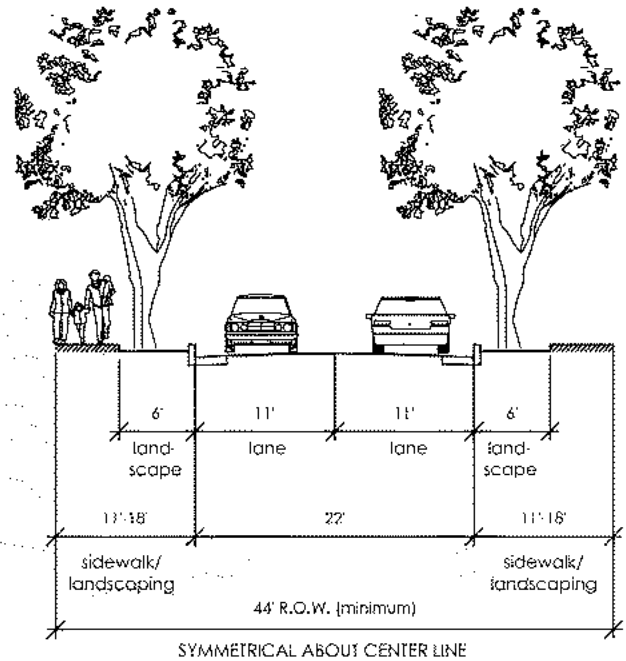
CITY OF GRIDLEY

DEPARTMENT OF PUBLIC WORKS

MAJOR COLLECTOR STREET (opt 1)

DWG. NO.

7A



DEFINITION	A STREET THAT SERVES ABUTTING PROPERTY AND CARRIES TRAFFIC TO THE ARTERIALS.
ACCESS	INTERSECTIONS AT GRADE WITH DIRECT ACCESS TO ABUTTING PROPERTY.
TRAFFIC FEATURES	TRAFFIC SIGNALS, PARKING RESTRICTIONS, AND OTHER CONTROL MEASURES, AS WARRANTED.

STRUCTURAL DESIGN SECTION
(MINIMUM)

AGGREGATE BASE
PRIME COAT
ASPHALT CONCRETE
FOG SEAL

APPROVED BY: RESOLUTION NO. DATE:	PUBLIC WORKS STANDARD NO.

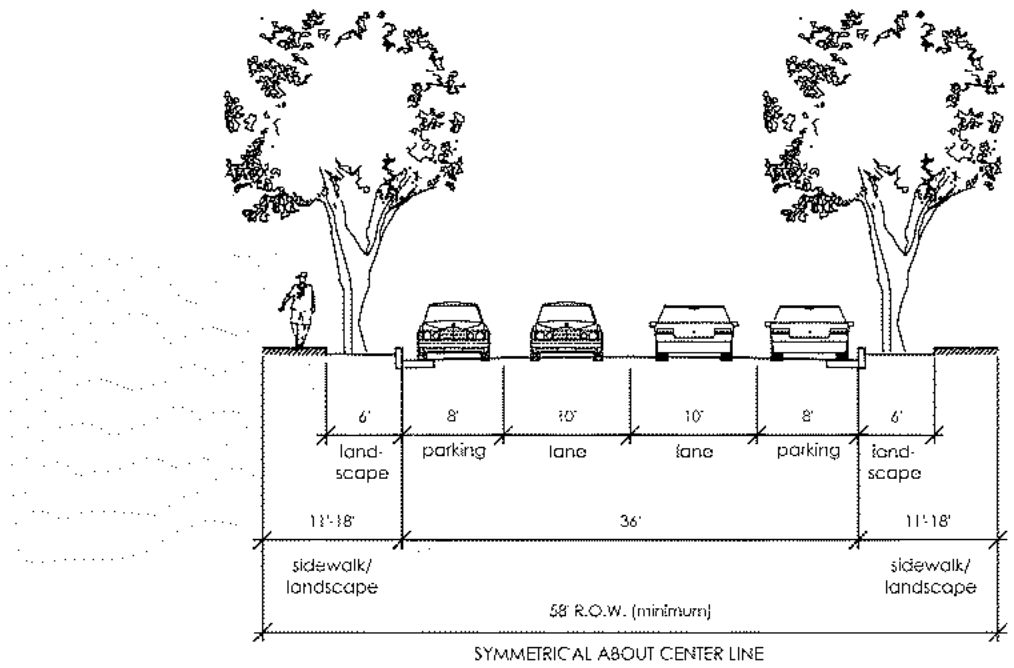
CITY OF GRIDLEY

DEPARTMENT OF PUBLIC WORKS

MAJOR COLLECTOR STREET (opt 2)

DWG. NO.

7B



DEFINITION	A STREET THAT SERVES ABUTTING PROPERTY AND CARRIES TRAFFIC TO THE ARTERIALS.
ACCESS	INTERSECTIONS AT GRADE WITH DIRECT ACCESS TO ABUTTING PROPERTY.
TRAFFIC FEATURES	TRAFFIC SIGNALS, PARKING RESTRICTIONS, AND OTHER CONTROL MEASURES, AS WARRANTED.

STRUCTURAL DESIGN SECTION
(MINIMUM)

AGGREGATE BASE
PRIME COAT
ASPHALT CONCRETE
FOG SEAL

APPROVED BY: RESOLUTION NO. DATE:	PUBLIC WORKS STANDARD NO.

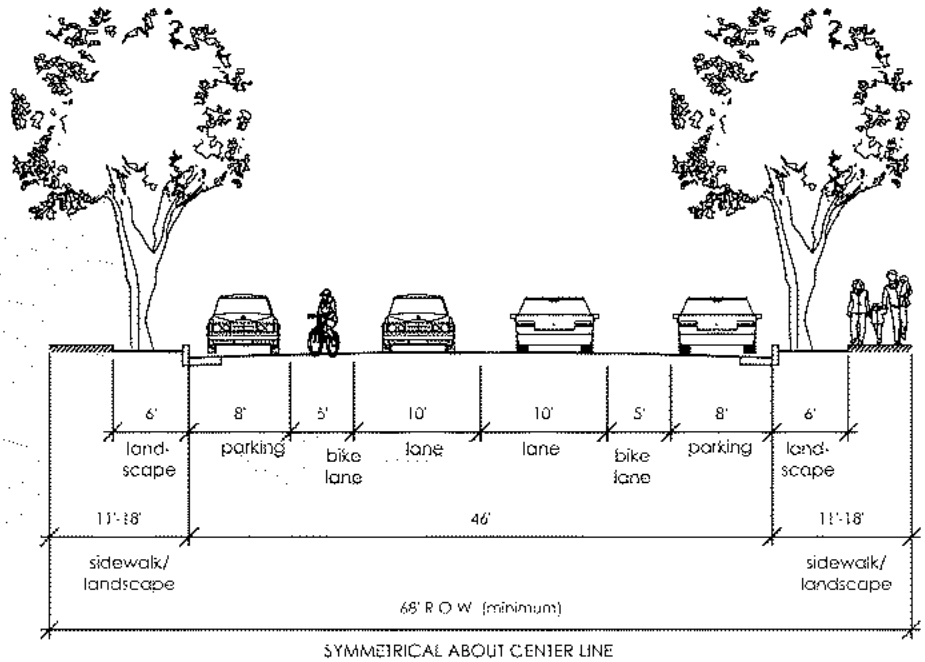
CITY OF GRIDLEY

DEPARTMENT OF PUBLIC WORKS

MINOR COLLECTOR STREET (opt 1)

DWG. NO.

7C



SYMMETRICAL ABOUT CENTER LINE

DEFINITION	A STREET THAT SERVES ABUTTING PROPERTY AND CARRIES TRAFFIC TO THE ARTERIALS.
ACCESS	INTERSECTIONS AT GRADE WITH DIRECT ACCESS TO ABUTTING PROPERTY.
TRAFFIC FEATURES	TRAFFIC SIGNALS, PARKING RESTRICTIONS, AND OTHER CONTROL MEASURE, AS WARRANTED.

STRUCTURAL DESIGN SECTION
(MINIMUM)

AGGREGATE BASE
PRIME COAT
ASPHALT CONCRETE
FOG SEAL

APPROVED BY: RESOLUTION NO. DATE:	PUBLIC WORKS STANDARD NO.

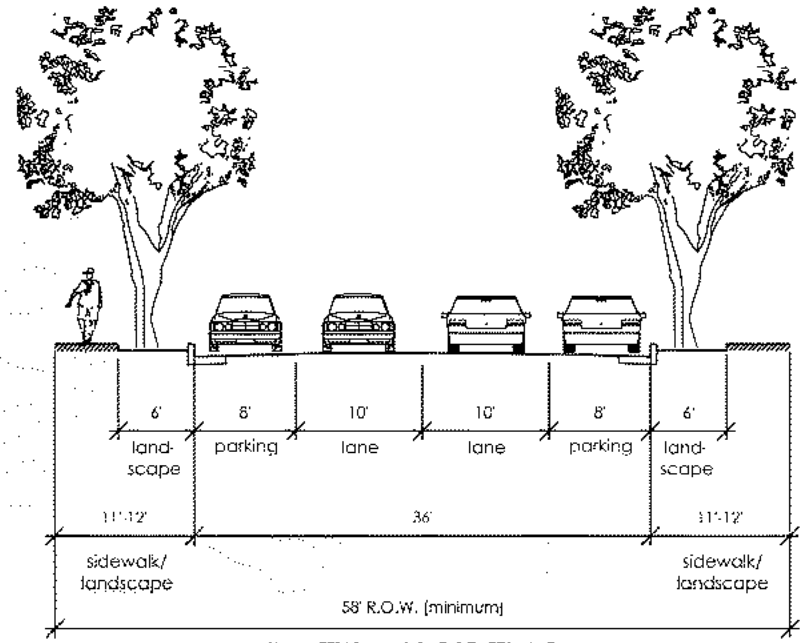
CITY OF GRIDLEY

DEPARTMENT OF PUBLIC WORKS

MINOR COLLECTOR STREET (opt 2)

DWG. NO.

7D



SYMMETRICAL ABOUT CENTER LINE

DEFINITION	A STREET WITH LOW TRAFFIC VOLUMES AND SPEEDS THAT SERVES ABUTTING PROPERTY.
ACCESS	INTERSECTIONS AT GRADE WITH DIRECT ACCESS TO ABUTTING PROPERTY.
TRAFFIC FEATURES	TRAFFIC SIGNALS, PARKING RESTRICTIONS, AND OTHER CONTROL MEASURES, AS WARRANTED.

STRUCTURAL DESIGN SECTION
(MINIMUM)

AGGREGATE BASE
PRIME COAT
ASPHALT CONCRETE
FOG SEAL

APPROVED BY: RESOLUTION NO. DATE:	PUBLIC WORKS STANDARD NO.

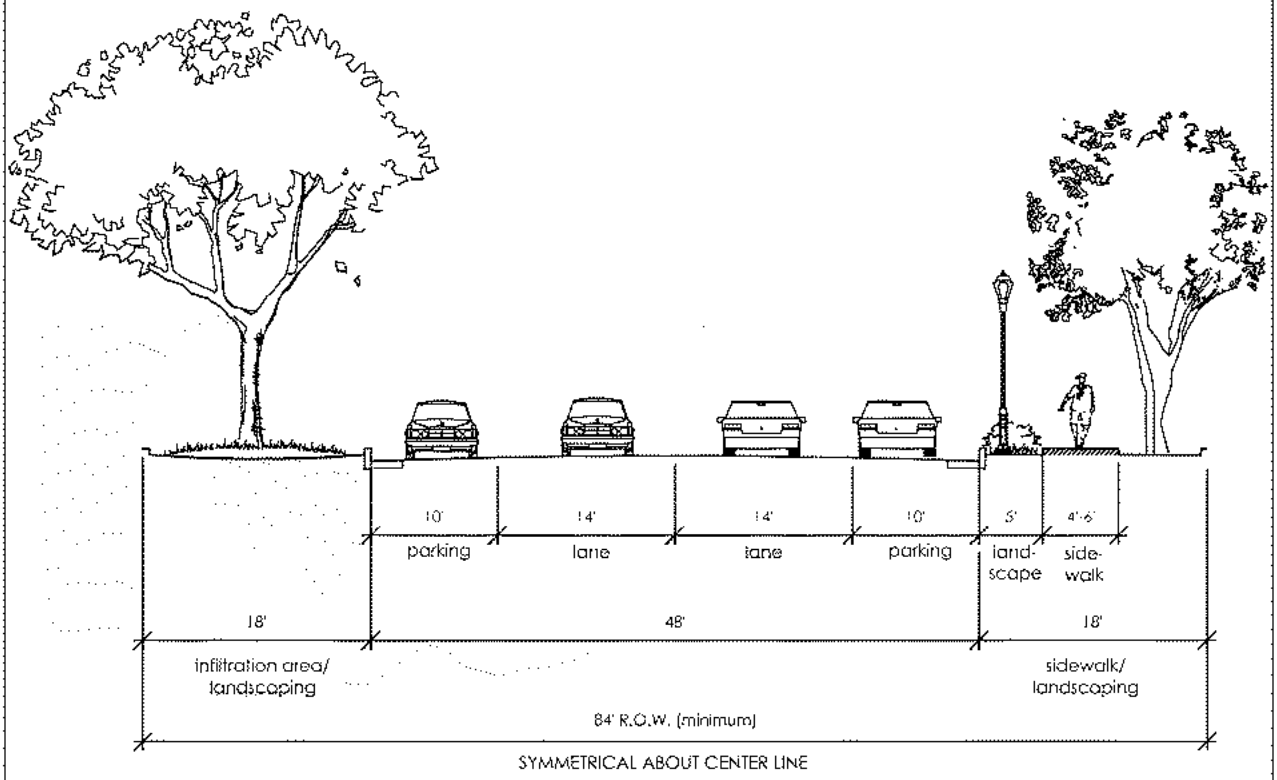
CITY OF GRIDLEY

DEPARTMENT OF PUBLIC WORKS

LOCAL STREET

DWG. NO.

7E



SYMMETRICAL ABOUT CENTER LINE

DEFINITION	A STREET SERVING TRAFFIC WITHIN AN INDUSTRIAL AREA.
ACCESS	INTERSECTIONS AT GRADE WITH DIRECT ACCESS TO ABUTTING PROPERTY.
TRAFFIC FEATURES	TRAFFIC CONTROLS AND PARKING RESTRICTIONS, AS WARRANTED.

STRUCTURAL DESIGN SECTION
(MINIMUM)

AGGREGATE BASE
PRIME COAT
ASPHALT CONCRETE
FOG SEAL

APPROVED BY: RESOLUTION NO. DATE:	PUBLIC WORKS STANDARD NO.

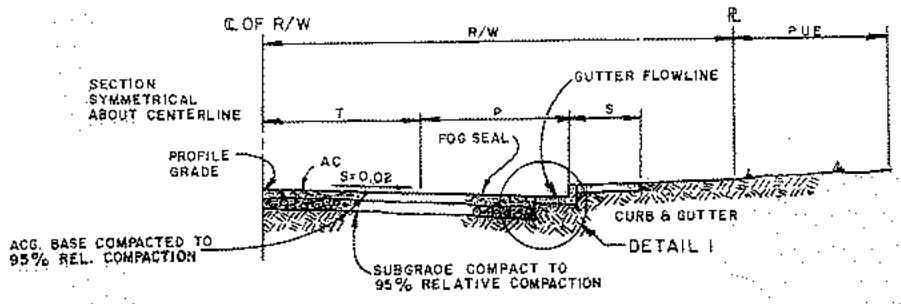
CITY OF GRIDLEY

DEPARTMENT OF PUBLIC WORKS

INDUSTRIAL STREET

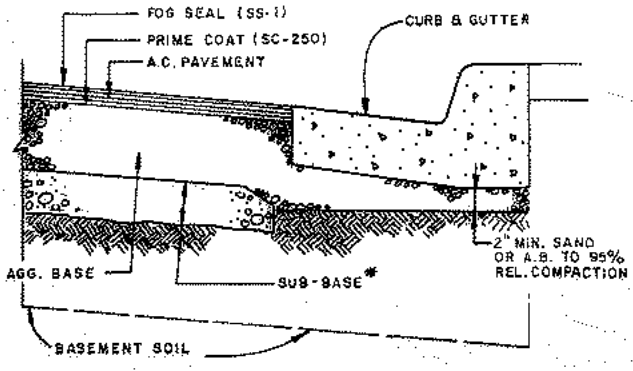
DWG. NO.

8



TYPICAL SECTION

SCALE: 1"=10'



*SUB-BASE REQUIRED IF R-VALUE OF SUBGRADE SOIL IS LESS THAN VALUE SHOWN. THICKNESS TO BE DETERMINED BY THE DESIGN ENGINEER AND APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.

DETAIL 1

SCALE: 3/4"=1'0"

CROSS SECTION WIDTH & THICKNESS

TYPE OF STREET	R/W	T	P	S	A.C.(MIN.)	A.B.(MIN)	T.I.	R VALUE (MIN.)
LOCAL-RESIDENTIAL	60'	12'	8'	4.5'	0.17'	0.50'	4	23
COLLECTOR	60'	12'	8'	4.5'	0.17'	0.67'	5	27
ARTERIAL	84'	24'	8'	4.5'	0.25'	0.67'	5.5	22
COMMERCIAL	84'	12'	10'	4.5'OR 10'	0.25'	0.67'	6	31
INDUSTRIAL	84'	14'	10'	4.5'	0.25'	1.00'	7.5	33

LEGEND

R/W — RIGHT OF WAY. INCREASE IN "P" OR "T" FROM THE VALUES GIVEN IN THE ABOVE TABLE WILL REQUIRE A CORRESPONDING INCREASE IN R/W LESS THAN 84'.

T — TRAVELED WAY. ON OTHER THAN LOCAL STREETS, TRAFFIC VOLUME MAY DICTATE ADDITION OF A 16' MEDIAN B/OR 12 LANES.

P — PARKING LANE. SHOULD A BIKE LANE BE REQUIRED, PARKING WILL BE PROHIBITED.

S — SIDEWALK. A 9.5' SIDEWALK WILL BE REQUIRED ON COMMERCIAL STREETS DESIGNATED BY THE DEPT. OF PUBLIC WORKS AS "PEDESTRIAN ORIENTED."

PUE — PUBLIC UTILITY EASEMENT. 10' WIDE OR AS DETERMINED BY THE DEPT. OF PUBLIC WORKS.

A.C./A.B. – MINIMUM THICKNESSES SHOWN ARE REQUIRED WITHOUT SUB-BASE FOR SUBGRADES WITH AN R-VALUE EQUAL TO OR GREATER THAN THE VALUE SHOWN.

T.I. — TRAFFIC INDEX. CONSTANT USED IN THE DESIGN OF FLEXIBLE PAVEMENTS BASED ON THE ESTIMATED VOLUME OF TRUCK TRAFFIC. (ESAL PER CALTRANS DESIGN MANUAL).

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

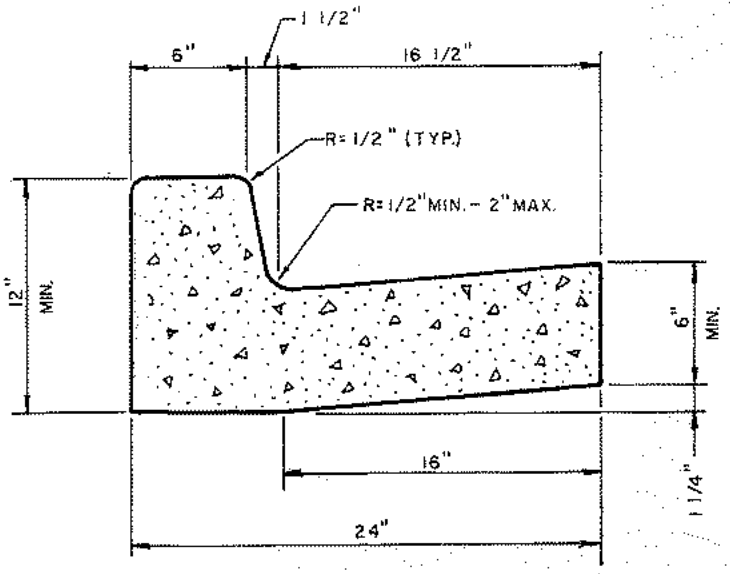
PUBLIC WORKS
STANDARD NO S4

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D Rollo 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

STANDARD STREET SECTIONS

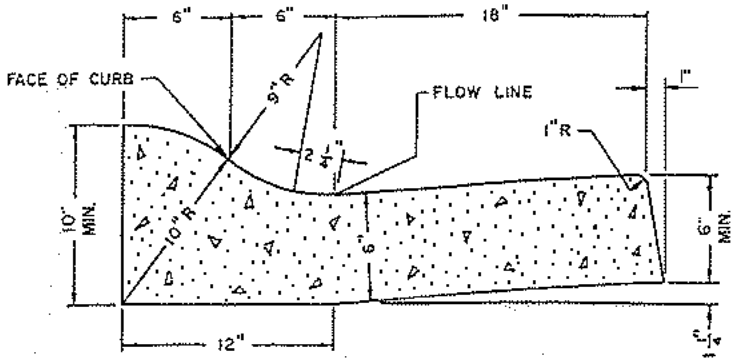
DWG. NO. 9



NOTES:

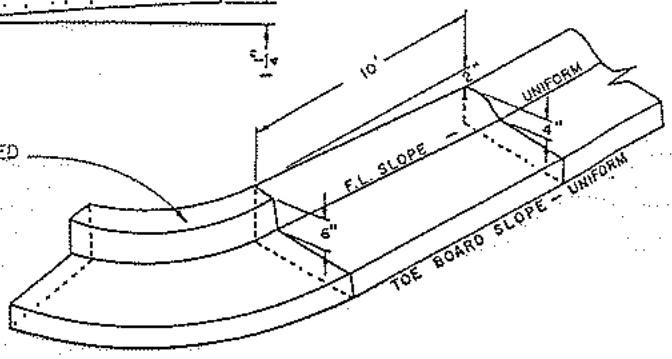
1. CROSS SECTIONAL AREA 1.29 SQUARE FEET.
2. 20.9 LF, PER CUBIC YARD OF CONCRETE.
3. CONCRETE SHALL BE CLASS B P.C.C.
4. AN APPROXIMATE 4-INCH, FLOW LINE SHALL BE LEFT SMOOTH TROWELED.
5. ALL BROOMING SHALL BE PARALLEL TO THE DIRECTION OF FLOW.
6. 1/2 INCH, PRE MOLDED JOINT FILLER SHALL BE INSTALLED IN EXPANSION JOINTS AT REGULAR INTERVALS NOT EXCEEDING 20 FEET, AT THE BC AND EC OF ALL CURB RETURNS AND AT THE END OF ALL DRIVEWAYS, SHALL BE FULL-DEPTH AND COMPLETELY FILL THE JOINT. A DEEP SCORE LINE SHALL BE PLACED PERPENDICULAR TO THE BACK OF CURB AT THE MIDPOINT BETWEEN EXPANSION JOINTS.
7. ALL WORK TO BE DONE AND ALL MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
8. A MINIMUM OF 2 INCHES OF SAND, OR CLASS 2 AGGREGATE BASE, TO BE PLACED UNDER THE CURB AND COMPACTED TO 95% REL. DENSITY.
9. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
10. CONTRACTOR SHALL NOTIFY THE CITY ENGINEER FOR INSPECTION AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S5	
DES: _____ DWN: L.R.W. CHK: _____ DATE: 11/95 APPROVED: Ray D Rose 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD 6" CURB AND GUTTER	DWG. NO. 10



NOTE:
30" OVERALL WIDTH
VERTICAL CURB AND GUTTER TO BE USED AT ALL CURB RETURNS.

EXPANSION JOINT AT BOTH ENDS AND MIDPOINT OF CURB RETURNS.

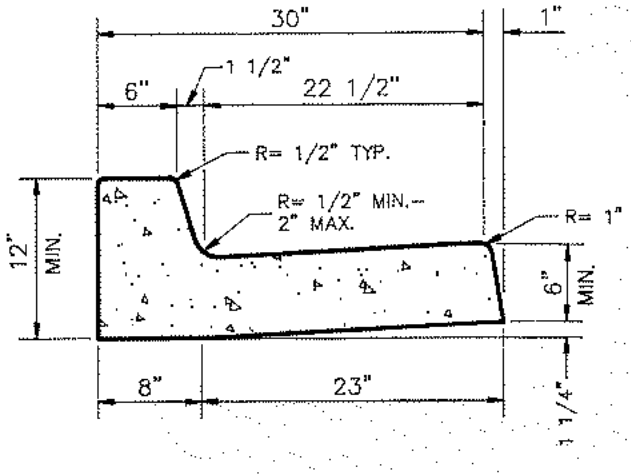


TRANSITION FROM ROLLED CURB AND GUTTER TO VERTICAL CURB AND GUTTER AT CURB RETURNS

NOTES:

1. CROSS SECTIONAL AREA 1.44 SQUARE FEET.
2. 18.7 L.F. PER CUBIC YARD OF CONCRETE.
3. CONCRETE SHALL BE CLASS B P.C.C.
4. AN APPROXIMATE 4-INCH FLOW LINE SHALL BE LEFT SMOOTH TROWELED.
5. ALL BROOMING SHALL BE PARALLEL TO THE DIRECTION OF FLOW.
6. 1/2 INCH, PRE-MOLDED JOINT FILLER SHALL BE INSTALLED IN EXPANSION JOINTS AT REGULAR INTERVALS NOT EXCEEDING 20 FEET, AT THE B.C. AND E.C. OF ALL CURB RETURNS AND AT THE END OF ALL DRIVEWAYS, SHALL BE FULL-DEPTH AND COMPLETELY FILL THE JOINT. A DEEP SCORE LINE SHALL BE PLACED PERPENDICULAR TO THE BACK OF CURB AT THE MIDPOINT BETWEEN EXPANSION JOINTS.
7. ALL WORK DONE AND ALL MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
8. A MINIMUM OF 2 INCHES OF SAND, OR CLASS 2 AGGREGATE BASE, TO BE PLACED UNDER THE CURB, AND COMPACTED TO 95% REL. DENSITY.
9. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF 0.5 POUND PER CUBIC YARD.
10. THE CONTRACTOR SHALLL NOTIFY THE CITY ENGINEER FOR INSPECTION AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.

APPROVED BY CITY COUNCIL RESOLUTION NO. 58 DATE: 12/5/94	PUBLIC WORKS STANDARD NO. S5A	
DES: R.D.R. DRWN: D.V. CHK: R.D.R. DATE: 11/95 APPROVED: CITY ENGINEER 18036 RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD ROLLED CURB AND GUTTER	DWG. NO. 10 A

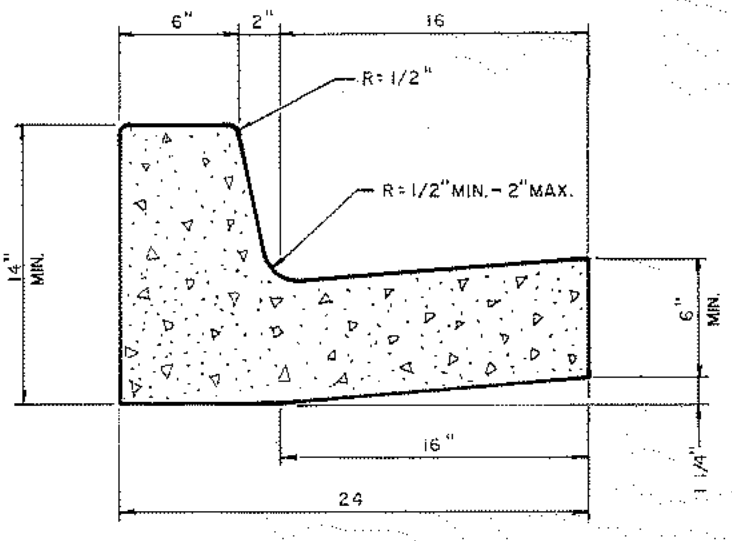


NOTES:

1. CROSS SECTIONAL AREA 1.54 SQUARE FEET.
2. 17.5 L.F. PER CUBIC YARD OF CONCRETE.
3. CONCRETE SHALL BE CLASS B P.C.C.
4. AN APPROXIMATE 4-INCH FLOW LINE SHALL BE LEFT SMOOTH TROWELED.
5. ALL BROOMING SHALL BE PARALLEL TO THE DIRECTION OF FLOW.
6. 1/2 INCH, PRE-MOLDED JOINT FILLER SHALL BE INSTALLED IN EXPANSION JOINTS AT REGULAR INTERVALS NOT EXCEEDING 20 FEET, AT THE B.C. AND E.C. OF ALL CURB RETURNS AND AT THE END OF ALL DRIVEWAYS. SHALL BE FULL-DEPTH AND COMPLETELY FILL THE JOINT. A DEEP SCORE LINE SHALL BE PLACED PERPENDICULAR TO THE BACK OF CURB AT THE MIDPOINT BETWEEN EXPANSION JOINTS.
7. ALL WORK DONE AND ALL MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
8. A MINIMUM OF 2 INCHES OF SAND, OR CLASS 2 AGGREGATE BASE, TO BE PLACED UNDER THE CURB, AND COMPACTED TO 95% REL. DENSITY.
9. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF 0.5 POUND PER CUBIC YARD.
10. THE CONTRACTOR SHALLL NOTIFY THE CITY ENGINEER FOR INSPECTION AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.

APPROVED BY CITY COUNCIL RESOLUTION NO. 58 DATE: 12/5/94	PUBLIC WORKS STANDARD NO. S5B

DES: R.D.R. DRWN: D.V. CHK: R.D.R. DATE: 11/95 APPROVED: CITY ENGINEER 18036 RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS 30" OVERALL WIDTH 6" CURB AND GUTTER	DWG. NO. 10B



NOTES:

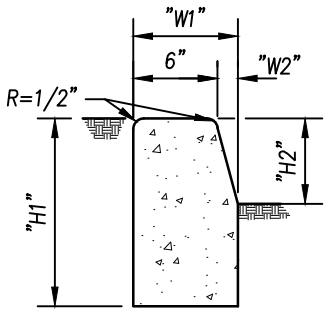
1. CROSS SECTIONAL AREA 1.39 SQUARE FEET.
2. 19 LF PER CUBIC YARD OF CONCRETE.
3. CONCRETE SHALL BE CLASS B P.C.C.
4. AN APPROXIMATE 4 INCH FLOWLINE SHALL BE LEFT SMOOTH TROWELED.
5. ALL BROOMING SHALL BE PARALLEL TO THE DIRECTION OF FLOW.
6. 1/2 INCH PRE-MOLDED JOINT FILLER SHALL BE INSTALLED IN EXPANSION JOINTS AT REGULAR INTERVALS NOT EXCEEDING 20 FEET, AT THE BC AND EC OF ALL CURB RETURNS, AND AT THE END OF ALL DRIVEWAYS, SHALL BE FULL-DEPTH AND COMPLETELY FILL THE JOINT. A DEEP SCORE LINE SHALL BE PLACED PERPENDICULAR TO THE BACK OF CURB AT THE MIDPOINT BETWEEN EXPANSION JOINTS.
7. ALL WORK TO BE DONE, AND ALL MATERIALS SUPPLIED, SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
8. A MINIMUM OF 2 INCHES OF SAND, OR CLASS 2 AGGREGATE BASE, TO BE PLACED UNDER THE CURB AND COMPACTED TO 95% REL. DENSITY.
9. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
10. CONTRACTOR SHALL NOTIFY THE CITY ENGINEER FOR INSPECTION AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.

APPROVED BY CITY COUNCIL RESOLUTION NO: 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S6
DES: _____ DWN: LRW CHK: _____ DATE: 11/95 APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD 8" CURB AND GUTTER
	DWG. NO. 11

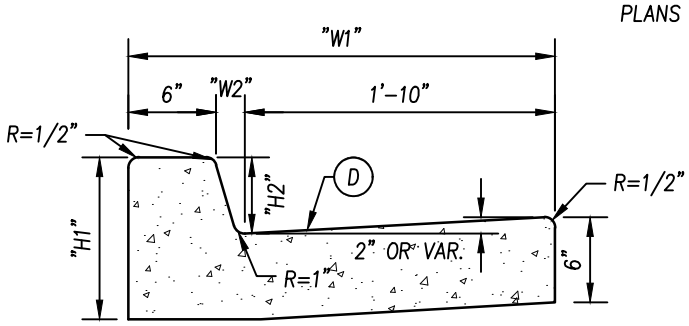
TABLE A

CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1–6	1'–2"	6"	7 1/2"	1 1/2"
A2–6	1'–0"	6"	2'–6"	2"
A2–8	1'–2"	8"	2'–6"	2"
A3–6	6"	5"	7 1/4"	1 1/4"
A3–8	8"	7"	7 3/4"	1 3/4"
A4	9 5/8"	3 3/8"	2'–6"	11"

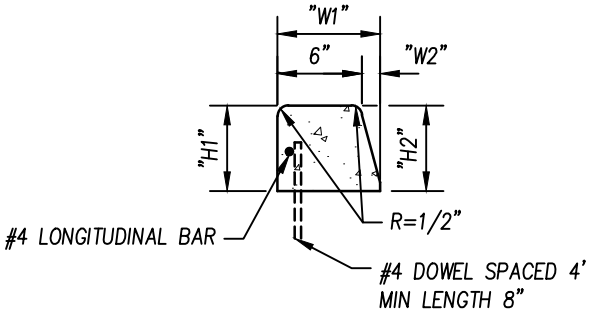
VERTICAL CURBS TYPES A1, A2, A3



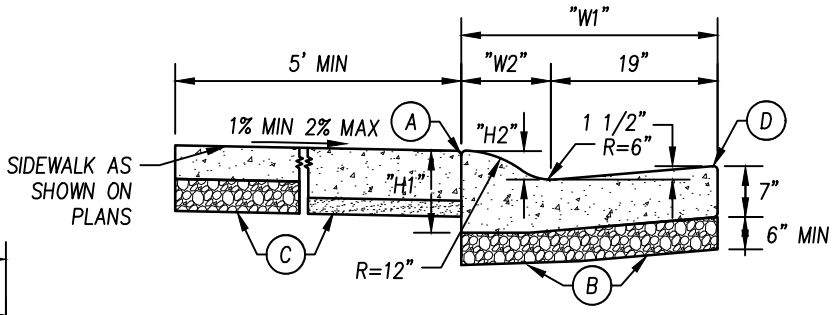
TYPE A1 CURBS
SEE TABLE A



TYPE A2 CURBS
SEE TABLE A



TYPE A3 CURBS
SUPERIMPOSED ON EXISTING PAVEMENT
SEE TABLE A



A4 ROLLED CURB & GUTTER

LEGEND:

A. 1/8" DEEP SCORE MARK OR COLD JOINT
B. CLASS 2 AGGREGATE BASE PROCESSED TO 95% RELATIVE COMPACTION.
C. ALL SIDEWALK HAS OPTION OF 4" CONCRETE ON 4" AGGREGATE BASE, OR 6" CONCRETE ON 2" AGGREGATE BASE OR SAND.
D. GUTTER PAN CROSS SLOPE NOT TO EXCEED 5% MAX, OR BE LESS THAN 4%.

NOTES:

1. MINIMUM WIDTH OF CLEAR PASSAGEWAY FOR SIDEWALK SHALL BE 4'–2".
2. RETAINING CURBS AND ACQUISITION OF CONSTRUCTION EASEMENT MAY BE NECESSARY FOR NARROW SIDEWALKS OR CURB HEIGHTS IN EXCESS OF 6".
3. ALL ADJOINING SIDEWALK, CURB AND GUTTER MAY BE POURED MONOLITHICALLY.

PUBLIC WORKS STANDARD NO. S6A

NO.	REVISION DATE	BY

DRAWN BY: A. HOLLADAY
CHECKED BY: D. HARDEN
SCALE: NONE
DATE: 12/5/2022

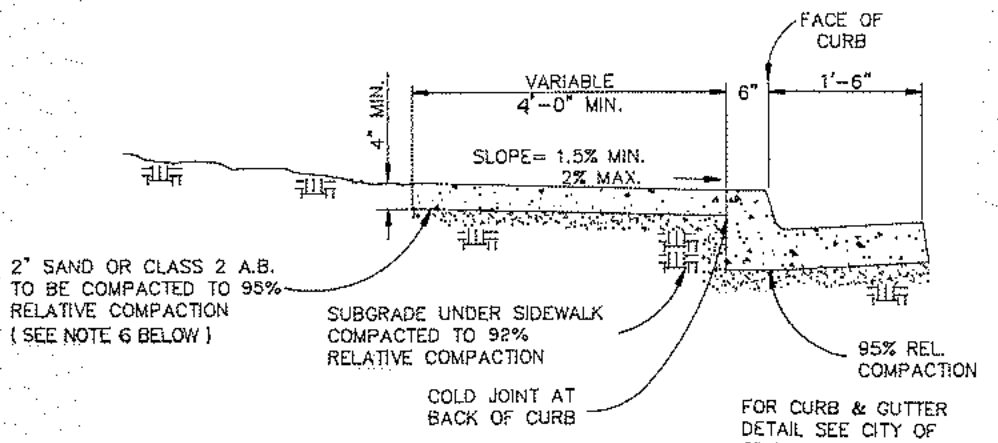
CURB AND GUTTER

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

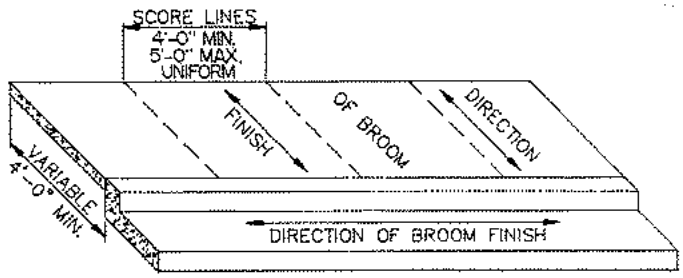
APPROVED BY:
DAVE HARDEN
CITY ENGINEER
RCE 84216

GRIDLEY CALIFORNIA

DWG NO. 11A



TYPICAL SECTION

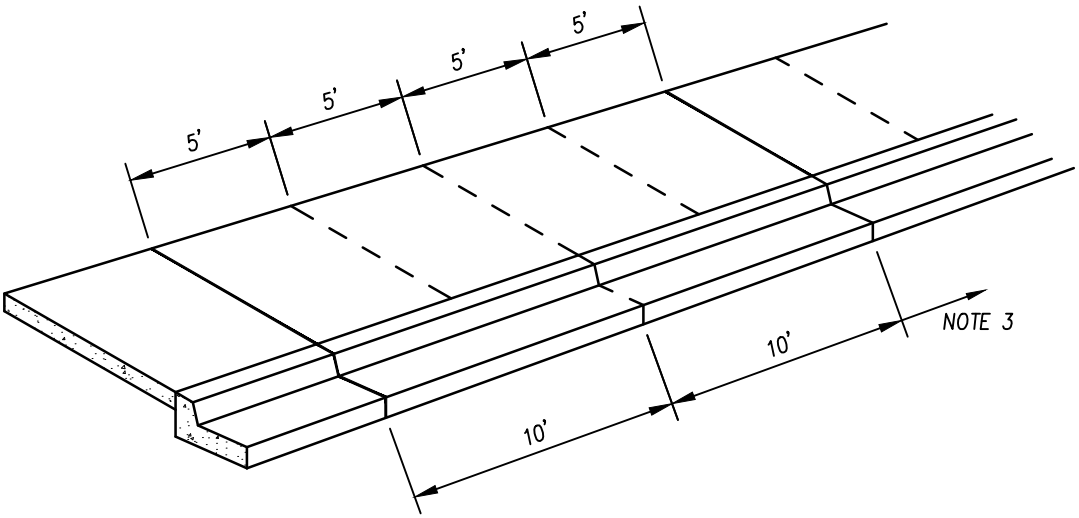


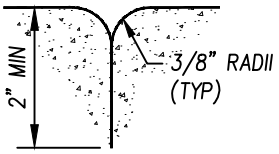
DETAIL

NOTES:

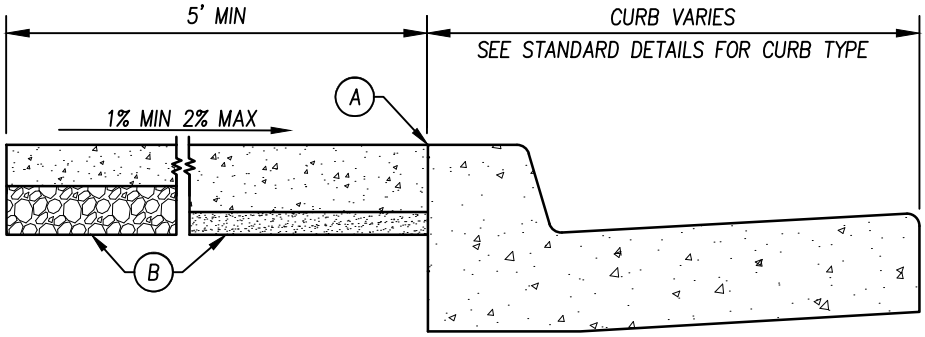
1. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF 0.5 POUND PER CUBIC YARD.
2. 1/2 INCH, PRE-MOLDED JOINT FILLER SHALL BE INSTALLED IN EXPANSION JOINTS AT REGULAR INTERVALS NOT EXCEEDING 20 FEET, AT THE B.C. AND E.C. OF ALL CURB RETURNS AND AT THE END OF ALL DRIVEWAYS. SHALL BE FULL DEPTH AND COMPLETELY FILL THE JOINT.
3. A MINIMUM OF 2 INCHES OF SAND, OR CLASS 2 AGGREGATE BASE, TO BE PLACED UNDER THE SIDEWALK. (SEE NOTE 6 BELOW)
4. ALL WORK DONE AND ALL MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
5. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER FOR INSPECTION AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.
6. FOR SIDEWALK ABUTTING ROLLED CURB AND GUTTER, THE THICKNESS OF AGGREGATE BASE UNDER THE SIDEWALK SHALL BE THE SAME AS THE THICKNESS PLACED UNDER THE STREET PAVEMENT.

APPROVED BY CITY COUNCIL RESOLUTION NO. 58 DATE: 12/5/94	PUBLIC WORKS STANDARD NO. S7
DES: R.D.R. DRWN: D.V. CHK: R.D.R. DATE: 11/95 APPROVED: Roy D. Rice 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD SIDEWALK
	DWG. NO. 12





TOOL JOINT (TYP.)
SEE "JOINTS"
(CALTRANS
STANDARD
SPECIFICATIONS)



CURB, GUTTER AND SIDEWALK SECTION
SEE TABLE A

LEGEND:

A. 1/8" DEEP SCORE MARK OR COLD JOINT
B. SUBGRADE PROCESSED TO 95% RELATIVE COMPACTION. ALL SIDEWALK HAS OPTION OF 4" CONCRETE ON 4" AGGREGATE BASE, OR 6" CONCRETE ON 2" AGGREGATE BASE OR SAND.

NOTES:

1. DISTANCE BETWEEN SCORE LINES NOT TO EXCEED 5' IN LONGITUDINAL & TRAVERSE DIRECTION IN SIDEWALK.
2. TOOL JOINTS AT 20' INTERNAL FOR SIDEWALK.
3. TOOL JOINTS AT 60' INTERNAL FOR CURB & GUTTER.
4. JOINTS IN SIDEWALK TO BE ADJACENT TO JOINTS IN CURB & GUTTER.
5. CURB & GUTTER TO HAVE 1" SCORE AT 10' INTERVALS.
6. GUTTER PAN CROSS SLOPE NOT TO EXCEED 5% MAX, IN FRONT OF A CURB RAMP ACCESS.
7. ADJOINING SIDEWALK, CURB AND GUTTER MAY BE POURED MONOLITHICALLY.

PUBLIC WORKS STANDARD NO. S7A

NO.	REVISION DATE	BY

DRAWN BY: A. HOLLADAY
CHECKED BY: D. HARDEN
SCALE: NONE
DATE: 12/5/2022

CURB AND GUTTER WITH SIDEWALK

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

APPROVED BY:
DAVE HARDEN
CITY ENGINEER
RCE 84216

GRIDLEY CALIFORNIA

DWG NO. 12A

Exhibit A
2016-R-036

NOTES:

1. ALL WORK TO BE DONE AND MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY MIXED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
3. THE AREA INCLUDED WITHIN THE SLOPES OF THE DRIVEWAY SHALL BE GIVEN A HEAVY BROOM FINISH AFTER BEING TROWELED.
4. SCORING LINES SHALL CORRESPOND WITH SCORING LINES IN THE ADJACENT SIDEWALK UNLESS OTHERWISE SPECIFIED.
5. TOP OF LIP AT FLOWLINE TO BE TROWELED STRAIGHT AND TRUE.
6. EXPANSION JOINTS SHALL BE CONSTRUCTED ON ℄ OF ALL DRIVEWAYS 25 FEET OR MORE IN WIDTH.
7. WHERE CURB IS EXISTING AND NO DEPRESSION HAS BEEN PROVIDED, CURB SHALL BE REMOVED TO THE FIRST EXPANSION JOINT BEYOND EITHER SIDE.
8. DRIVEWAYS SHALL NOT BE CONSTRUCTED CLOSER THAN 20 FEET TO STREET CURB RETURNS UNLESS APPROVED BY THE ENGINEER.
9. ALLEY CURB RETURN MAY BE DEPRESSED AS PART OF THE DRIVEWAY ONLY WHEN APPROVED BY THE ENGINEER.
10. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON THE SAME LOT SHALL BE 24 FEET.
11. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON ADJACENT LOTS SHALL BE 6 FEET.
12. WHERE AN EXISTING SIDEWALK IS IN PLACE, IT SHALL BE REMOVED TO THE FIRST EXPANSION JOINT BEYOND EITHER SIDE.

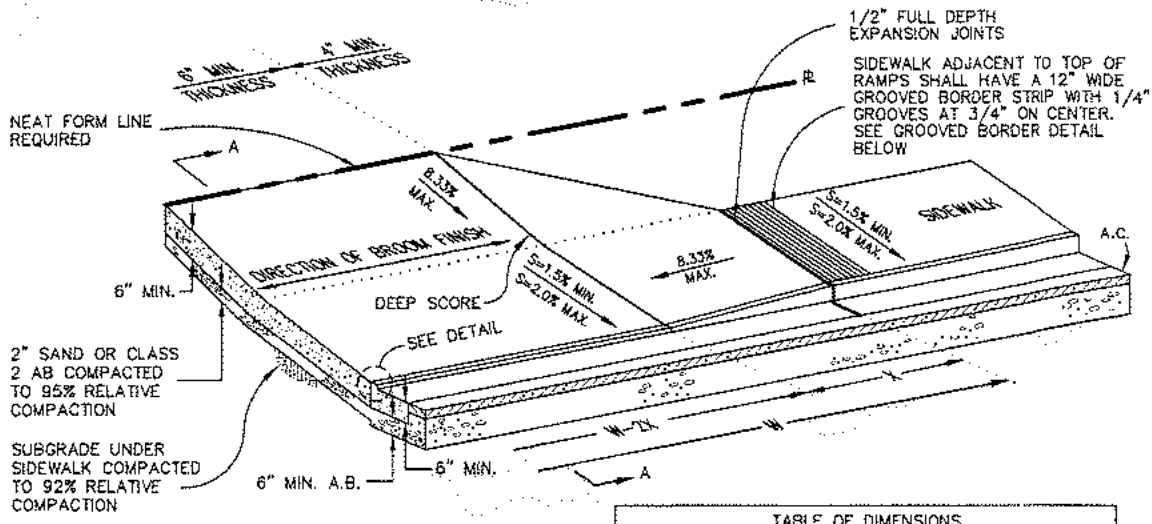
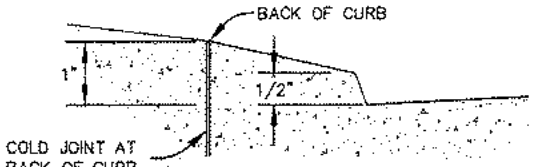
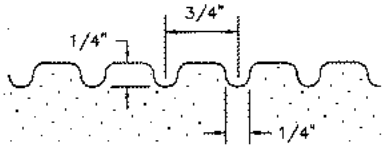


TABLE OF DIMENSIONS			
CURB FACE	X DIST	W MIN.	W-2X MIN.
6"	5'-0"	22'	12'
8"	7'-0"	26'	12'



DETAIL
NO SCALE



GROOVED BORDER DETAIL
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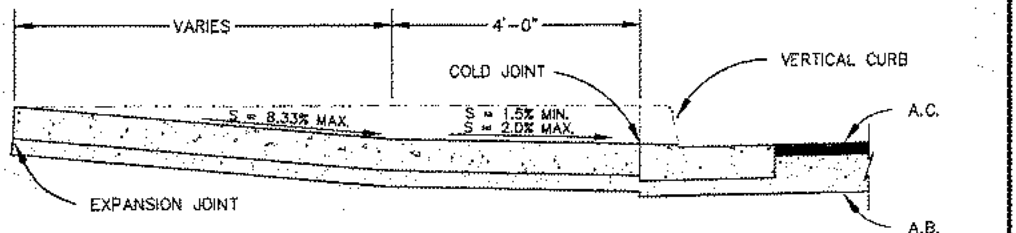


SECTION A-A
N.T.S.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 2004-R-028
DATE: JULY 6, 2004

PUBLIC WORKS
STANDARD NO. S8

DES: P.W.R. DRWN: P.W.R.
CHK: H.L.V. DATE: JUNE 2004
APPROVED:

Bruce A. Nash 33381
CITY ENGINEER RCE NO.

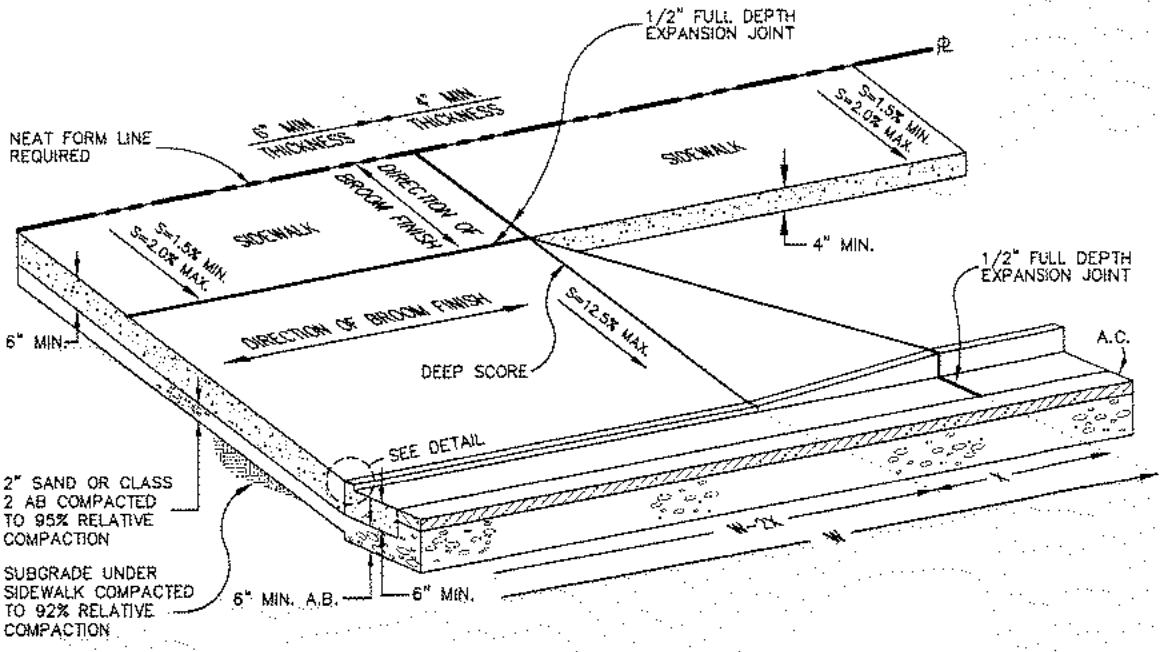
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

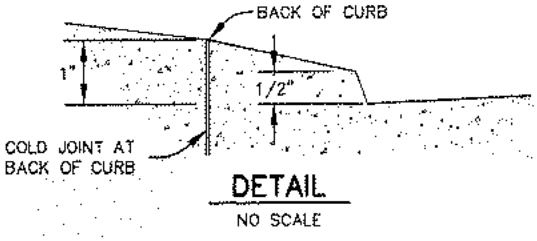
STANDARD RESIDENTIAL DRIVEWAY
(CONTIGUOUS SIDEWALK)

DWG. NO.
13

NOTES:

1. ALL WORK TO BE DONE AND MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY MIXED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
3. THE AREA INCLUDED WITHIN THE SLOPES OF THE DRIVEWAY SHALL BE GIVEN A HEAVY BROOM FINISH AFTER BEING TROWELED.
4. SCORING LINES SHALL CORRESPOND WITH SCORING LINES IN THE ADJACENT SIDEWALK UNLESS OTHERWISE SPECIFIED.
5. TOP OF LIP AT FLOWLINE TO BE TROWELED STRAIGHT AND TRUE.
6. EXPANSION JOINTS SHALL BE CONSTRUCTED ON ℄ OF ALL DRIVEWAYS 25 FEET OR MORE IN WIDTH.
7. WHERE CURB IS EXISTING AND NO DEPRESSION HAS BEEN PROVIDED, CURB SHALL BE REMOVED TO THE FIRST EXPANSION JOINT BEYOND EITHER SIDE.
8. DRIVEWAYS SHALL NOT BE CONSTRUCTED CLOSER THAN 20 FEET TO STREET CURB RETURNS UNLESS APPROVED BY THE ENGINEER.
9. ALLEY CURB RETURN MAY BE DEPRESSED AS PART OF THE DRIVEWAY ONLY WHEN APPROVED BY THE ENGINEER.
10. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON THE SAME LOT SHALL BE 24 FEET.
11. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON ADJACENT LOTS SHALL BE 6 FEET.
12. WHERE AN EXISTING SIDEWALK IS IN PLACE, IT SHALL BE REMOVED TO THE FIRST EXPANSION JOINT BEYOND EITHER SIDE.





DETAIL
NO SCALE

TABLE OF DIMENSIONS			
CURB FACE	X DIST	W MIN.	W-2X MIN.
6"	4'-0"	19'	12'
8"	5'-0"	22'	12'
10"	6'-0"	24'	12'
12"	7'-0"	26'	12'

APPROVED BY CITY COUNCIL
RESOLUTION NO. 2004-R-028
DATE: JULY 6, 2004

PUBLIC WORKS STANDARD NO. S8A

DES: P.W.R. DRWN: P.W.R.
CHK: H.L.V. DATE: JUNE 2004
APPROVED:

Bruce A. Luck 33381
CITY ENGINEER RCE NO.

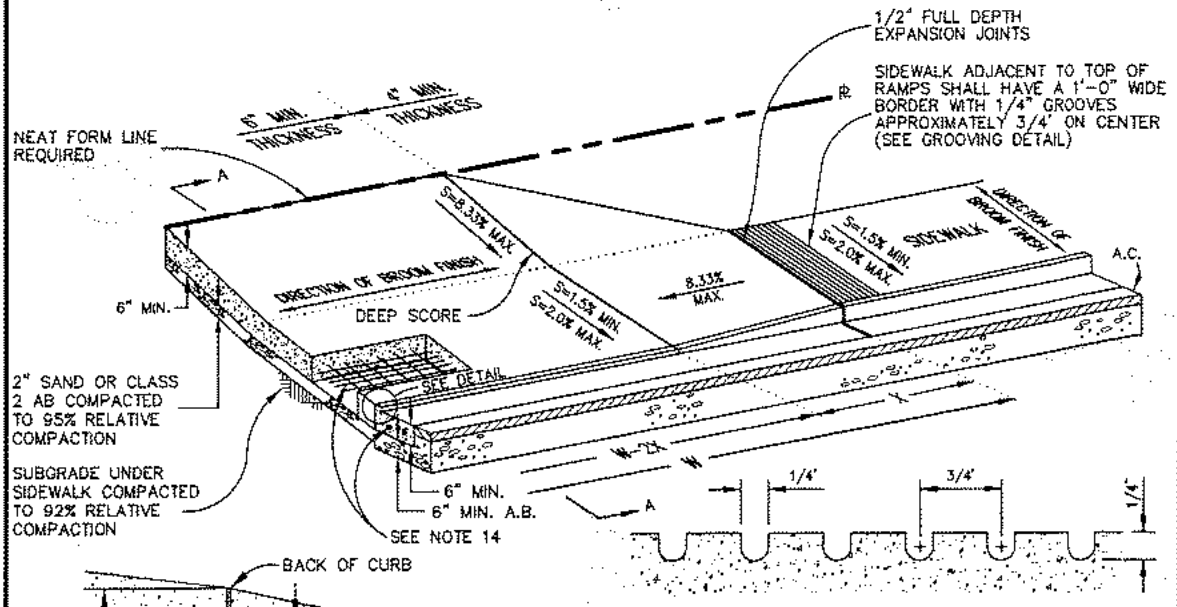
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

STANDARD RESIDENTIAL DRIVEWAY (SEPARATED SIDEWALK)

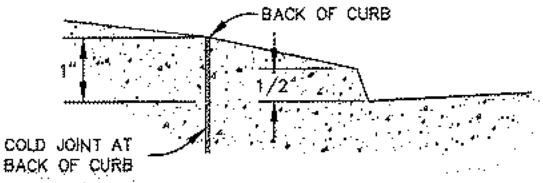
DWG. NO. 13A

NOTES:

1. ALL WORK TO BE DONE AND MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
3. THE AREA INCLUDED WITHIN THE SLOPES OF THE DRIVEWAY SHALL BE GIVEN A HEAVY BROOM FINISH AFTER BEING TROWELED.
4. SCORING LINES SHALL CORRESPOND WITH SCORING LINES IN THE ADJACENT SIDEWALK UNLESS OTHERWISE SPECIFIED.
5. WHERE CURB IS EXISTING AND NO DEPRESSION HAS BEEN PROVIDED, CURB SHALL BE REMOVED TO THE NEAREST EXPANSION JOINT BEYOND EITHER SIDE.
6. DRIVEWAYS SHALL NOT BE CONSTRUCTED CLOSER THAN 20 FEET TO STREET CURB RETURNS UNLESS APPROVED BY THE ENGINEER.
7. MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON THE SAME LOT SHALL BE 24 FEET.
8. WHERE AN EXISTING SIDEWALK IS IN PLACE AND IS LESS THAN THE REQUIRED THICKNESS, THAT PORTION OF SUCH SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY SHALL BE REMOVED TO THE NEAREST EXPANSION JOINT BEYOND EITHER SIDE.
9. THE TOTAL LENGTH OF DRIVEWAYS CONSTRUCTED ON ANY SINGLE BUSINESS FRONTAGE SHALL NOT EXCEED SIXTY(60) PERCENT OF SAID PROPERTY FRONTAGE UNLESS APPROVED BY THE ENGINEER.
10. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN ADJACENT LOTS SHALL BE 6 FEET.
11. EXPANSION JOINTS SHALL BE CONSTRUCTED ON ℄ OF DRIVEWAYS 25 FEET OR MORE IN WIDTH
12. DRIVEWAY WIDTH MAY BE INCREASED WHEN APPROVED BY THE ENGINEER.
13. TOP OF LIP AT FLOWLINE TO BE TROWELED STRAIGHT AND TRUE.
14. ALL DRIVEWAYS SHALL HAVE 2 NO. 4 REBARS 12' O.C. IN THE GUTTER AND 6' X 6' 10 GA. WIRE MESH THROUGHOUT THE APPROACH.

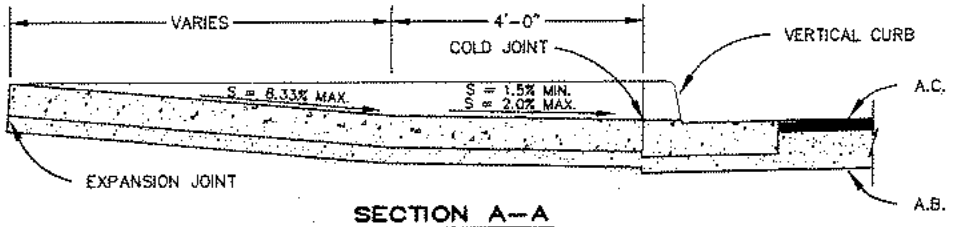


GROOVING DETAIL
NO SCALE



DETAIL
NO SCALE

TABLE OF DIMENSIONS			
CURB FACE	X DIST	W MAX.	W-2X MAX.
6"	5'-0"	45'	35'
8"	7'-0"	49'	35'
10"	9'-0"	53'	35'
12"	11'-0"	57'	35'



SECTION A-A
NO SCALE

APPROVED BY CITY COUNCIL
RESOLUTION NO. 2008-R-055
DATE: AUGUST 18, 2008

PUBLIC WORKS
STANDARD NO. S9

DES: H.L.V. DRWN: P.W.R.
CHK: B.A.N. DATE: JULY 2008
APPROVED:
Bjorn A. Nash 33381
CITY ENGINEER RCE NO.

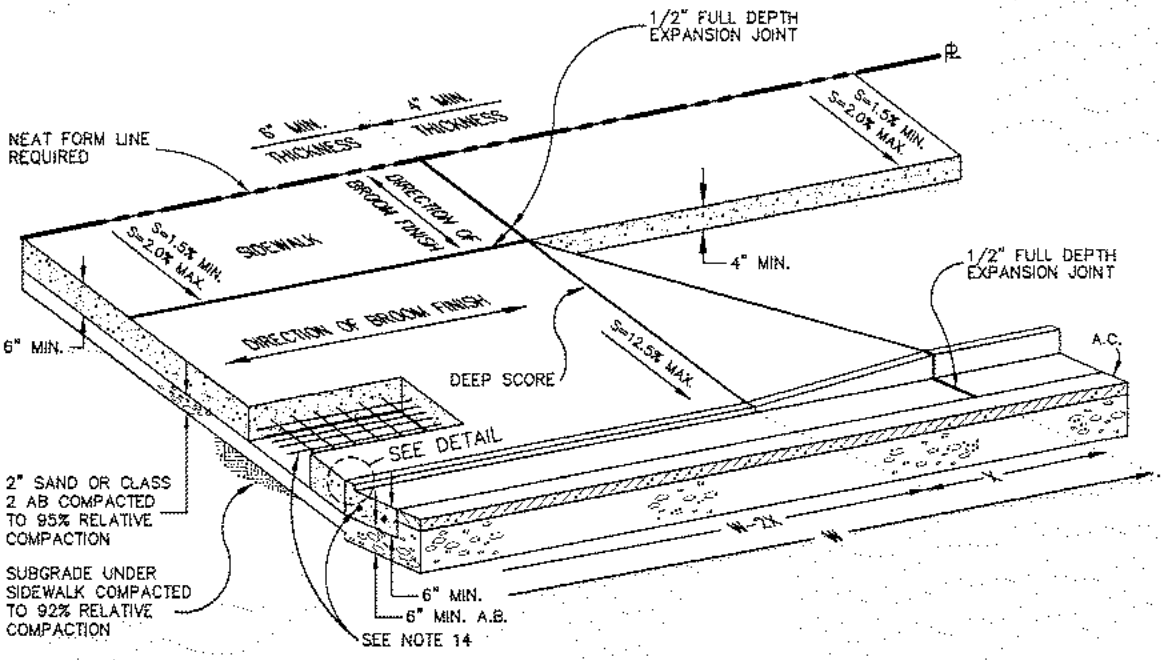
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

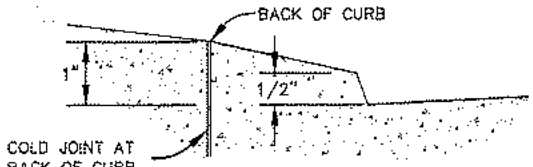
STANDARD COMMERCIAL DRIVEWAY
(CONTIGUOUS SIDEWALK)

DWG. NO.
14

NOTES:

1. ALL WORK TO BE DONE AND MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
3. THE AREA INCLUDED WITHIN THE SLOPES OF THE DRIVEWAY SHALL BE GIVEN A HEAVY BROOM FINISH AFTER BEING TROWELED.
4. SCORING LINES SHALL CORRESPOND WITH SCORING LINES IN THE ADJACENT SIDEWALK UNLESS OTHERWISE SPECIFIED.
5. WHERE CURB IS EXISTING AND NO DEPRESSION HAS BEEN PROVIDED, CURB SHALL BE REMOVED TO THE NEAREST EXPANSION JOINT BEYOND EITHER SIDE.
6. DRIVEWAYS SHALL NOT BE CONSTRUCTED CLOSER THAN 20 FEET TO STREET CURB RETURNS UNLESS APPROVED BY THE ENGINEER.
7. MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON THE SAME LOT SHALL BE 24 FEET.
8. WHERE AN EXISTING SIDEWALK IS IN PLACE AND IS LESS THAN THE REQUIRED THICKNESS, THAT PORTION OF SUCH SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY SHALL BE REMOVED TO THE NEAREST EXPANSION JOINT BEYOND EITHER SIDE.
9. THE TOTAL LENGTH OF DRIVEWAYS CONSTRUCTED ON ANY SINGLE BUSINESS FRONTAGE SHALL NOT EXCEED SIXTY(60) PERCENT OF SAID PROPERTY FRONTAGE UNLESS APPROVED BY THE ENGINEER.
10. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN ADJACENT LOTS SHALL BE 6 FEET.
11. EXPANSION JOINTS SHALL BE CONSTRUCTED ON ℄ OF DRIVEWAYS 25 FEET OR MORE IN WIDTH
12. DRIVEWAY WIDTH MAY BE INCREASED WHEN APPROVED BY THE ENGINEER.
13. TOP OF LIP AT FLOWLINE TO BE TROWELED STRAIGHT AND TRUE.
14. ALL DRIVEWAYS SHALL HAVE 2 NO. 4 REBARS 12" O.C. IN THE GUTTER AND 6" X 6" 10 GA. WIRE MESH THROUGHOUT THE APPROACH.





DETAIL
NO SCALE

TABLE OF DIMENSIONS			
CURB FACE	X DIST	W MAX.	W-2X MAX.
6"	4'-0"	43'	35'
8"	5'-0"	45'	35'
10"	6'-0"	47'	35'
12"	7'-0"	49'	35'

APPROVED BY CITY COUNCIL
RESOLUTION NO. 2004-R-028
DATE: JULY 6, 2004

PUBLIC WORKS STANDARD NO. S9A

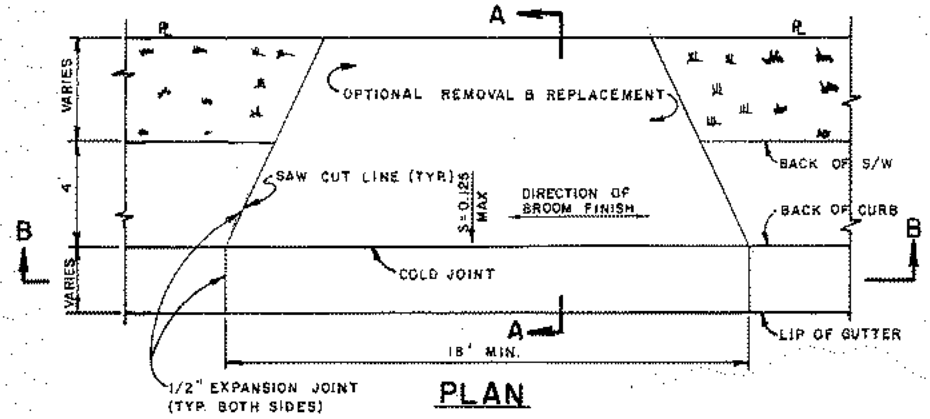
DES: P.W.R. DRWN: P.W.R.
CHK: H.L.V. DATE: JUNE 2004
APPROVED:

Bruce A. Nock 33381
CITY ENGINEER RCE NO.

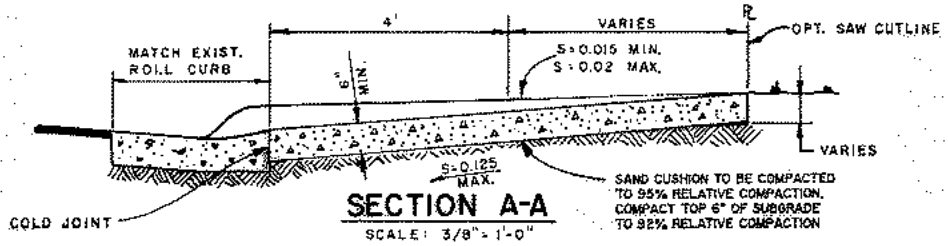
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

STANDARD COMMERCIAL DRIVEWAY (SEPARATED SIDEWALK)

DWG. NO. 14A

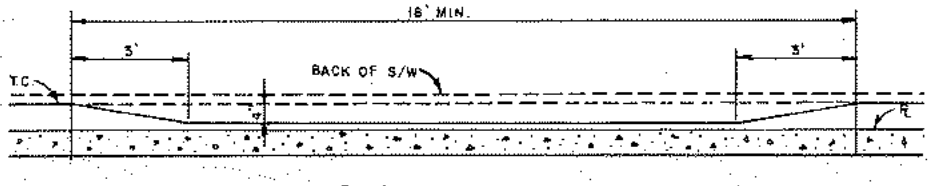


PLAN



SECTION A-A

SCALE: 3/8"=1'-0"



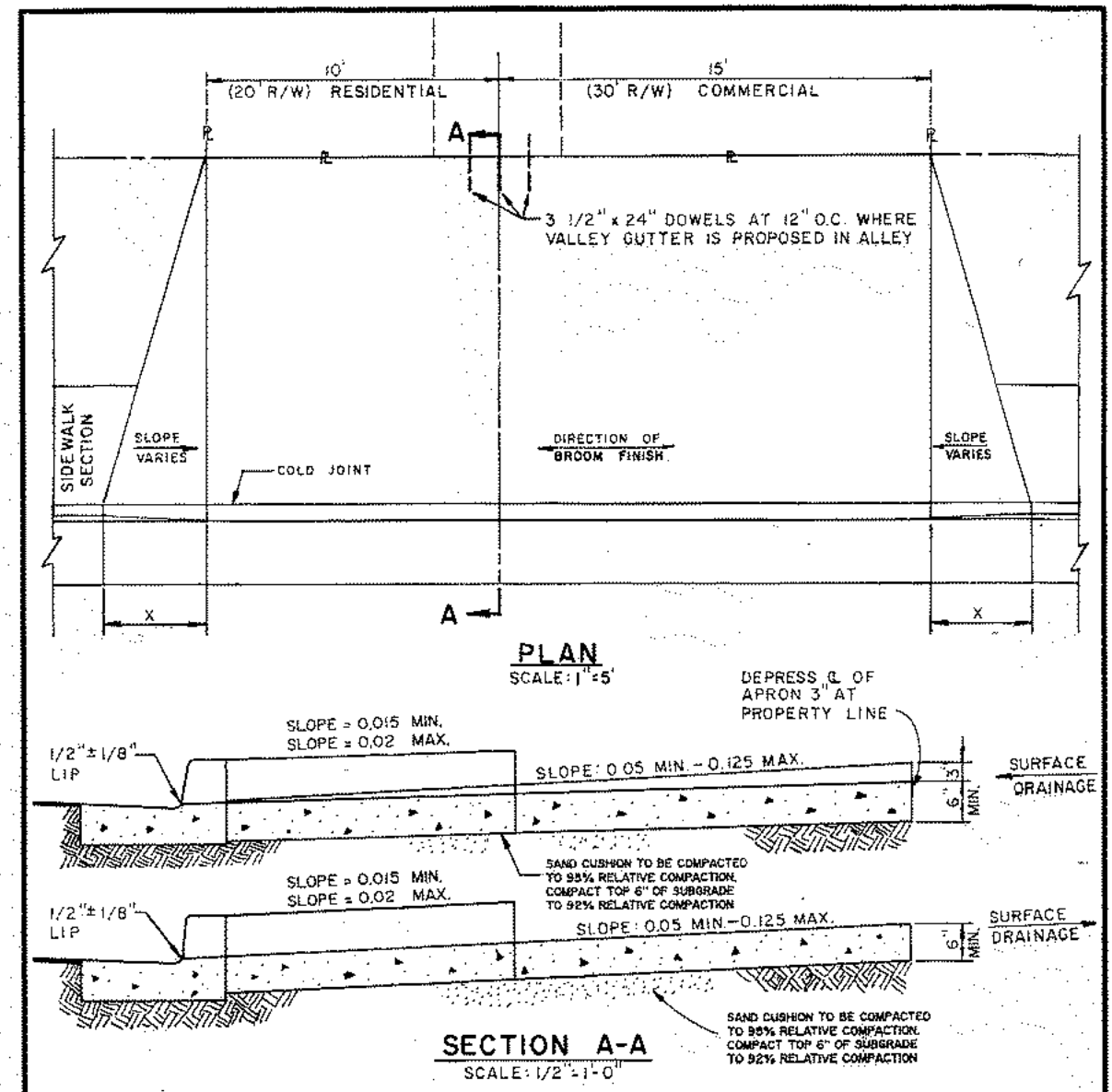
SECTION B-B

SCALE: 1/4"=1'-0"

NOTE:

1. SAW CUT CONCRETE CURB, GUTTER, SIDEWALK, AND DRIVEWAY OR REMOVE TO NEAREAST EXPANSION JOINT.
2. ALL CONCRETE SHALL BE CLASS B P.C.C.
3. THE AREA INCLUDED WITHIN THE SLOPES OF THE DRIVEWAY SHALL BE GIVEN A HEAVY BROOM FINISH AFTER BEING TROWELED.
4. SCORING LINES SHALL CORRESPOND WITH SCORING LINES IN THE ADJACENT SIDEWALK UNLESS OTHERWISE SPECIFIED.
5. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

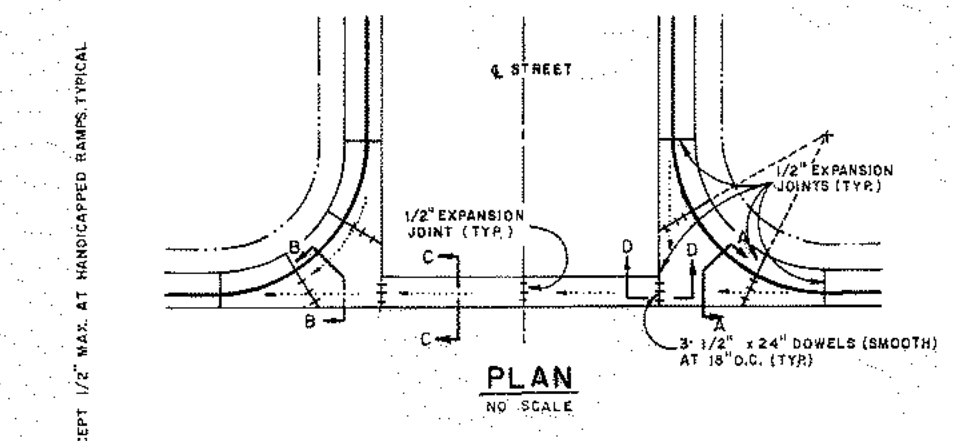
APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S10
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD DRIVEWAY MODIFICATION FOR EXISTING ROLL CURB
	DWG. NO. 15



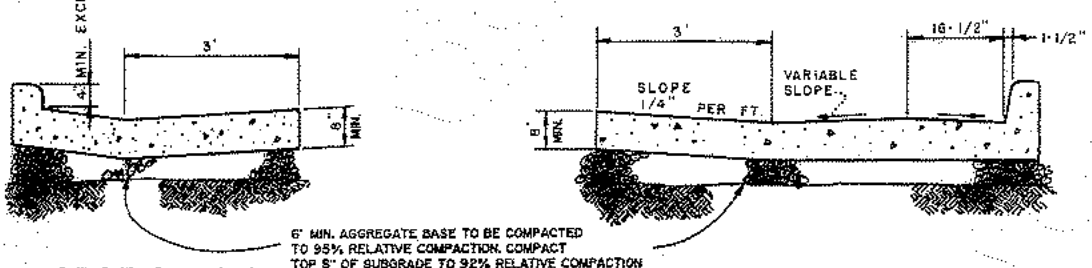
NOTES:

1. ALL CONCRETE SHALL BE CLASS B P.C.C.
2. ALL WORK PERFORMED AND MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
3. X DISTANCE SHALL BE THE SAME AS FOR COMMERCIAL DRIVEWAYS UNLESS SPECIAL WRITTEN PERMISSION IS GRANTED.
4. MINIMUM WIDTH OF SIDEWALK IS 4 FEET, SUBJECT TO INCREASE BY THE ENGINEER, FOR LOCATIONS WITH HEAVY PEDESTRIAN TRAFFIC.
5. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCREYE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S11
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rolle 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD ALLEY ENTRANCE
	DWG. NO. 16

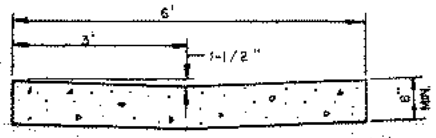


PLAN
NO SCALE

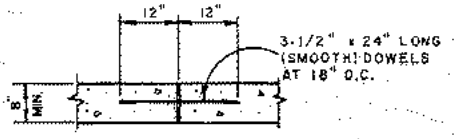


SECTION A-A
UPHILL SIDE

SECTION B-B



SECTION C-C

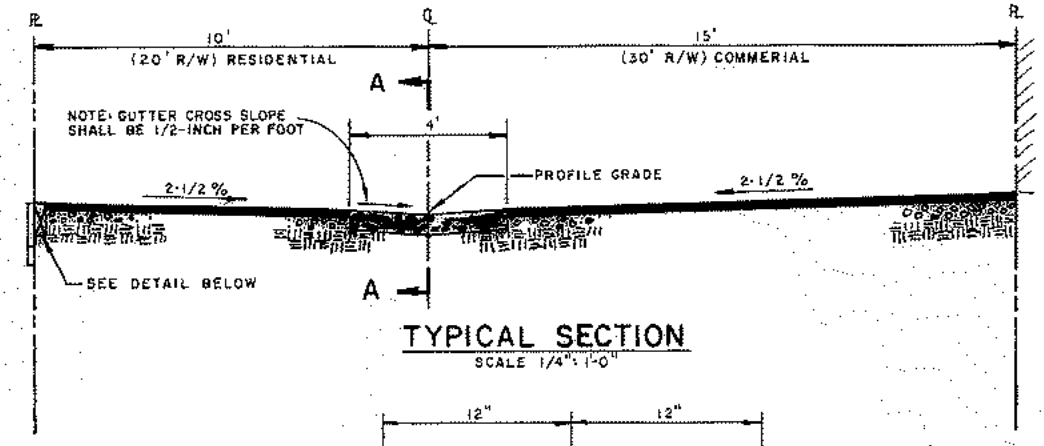


SECTION D-D
TYPICAL EXPANSION JOINT

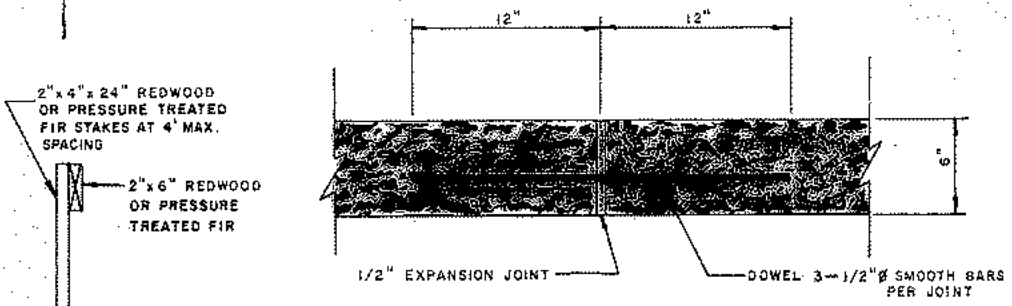
NOTES:

1. WORK TO BE DONE, AND ALL MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. CONCRETE SHALL BE CLASS B P.C.C.
3. AN 8-INCH FLOW LINE SHALL BE LEFT SMOOTH TROWELED.
4. BROOMING SHALL BE PARALLEL TO THE DIRECTION OF FLOW.
5. EXPANSION JOINT AT MIDPOINT, BUT NOT TO EXCEED 15 FEET OR AS DIRECTED BY THE ENGINEER.
6. NO STANDING WATER WILL BE ALLOWED THRU THE LENGTH OF THE CROSS GUTTER AND THE SPANDRELS.
7. CONTROL JOINT SHALL BE INSTALLED RADIALLY THRU SPANDREL AT LIMITS OF HANDICAP RAMP.
8. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S12
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS VALLEY GUTTER
	DWG. NO. 17



TYPICAL SECTION
SCALE 1/4" = 1'-0"



SECTION A-A
SCALE 1" = 1'-0"

HEADER DETAIL
SCALE 1/2" = 1'-0"

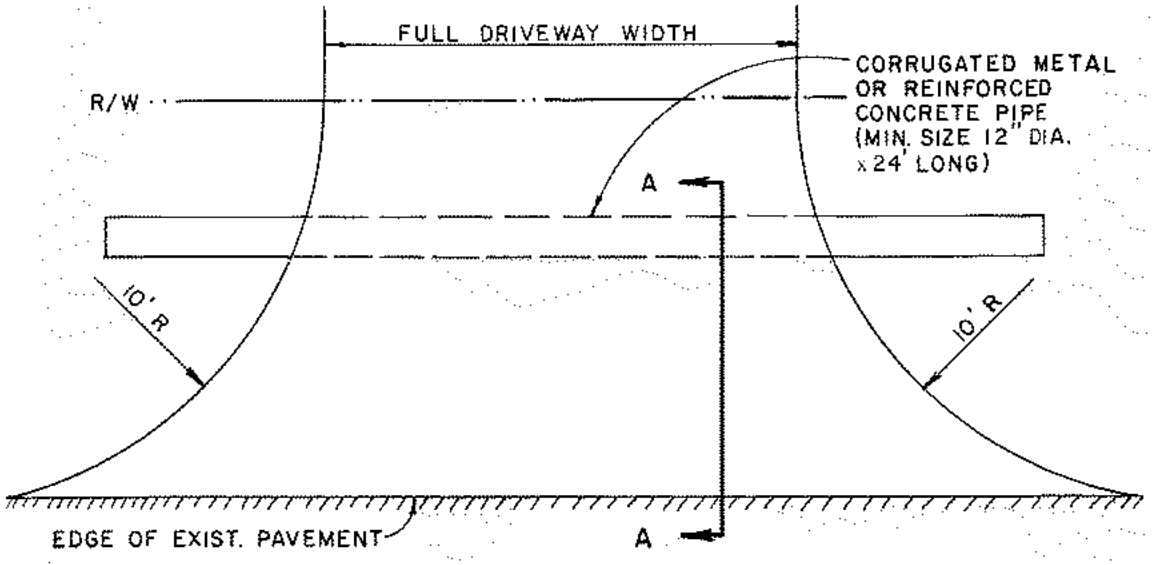
NOTES :

1. SURFACE AND BASE THICKNESS SHALL BE DETERMINED IN ACCORDANCE WITH GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS, OR AS DIRECTED BY THE ENGINEER, BUT IN NO CASE BE LESS THAN OUTLINED BELOW.
2. HEADERS SHALL BE USED EXCEPT WHEN BUILDINGS OR OTHER PERMANENT IMPROVEMENTS ABUT THE ALLEY, AND SHALL BE LEFT IN PLACE AFTER CONSTRUCTION.
3. INSTALL FULL DEPTH EXPANSION JOINTS EVERY 20' IN VALLEY GUTTER.
4. EXPANSION JOINTS TO BE DOWELED AS SHOWN ABOVE.
5. REDWOOD HEADERS TO BE FOUNDATION GRADE OR BETTER.
6. WORK PREFORMED AND MATERIALS SUPPLIED SHALL CONFORM TO GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
7. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OR APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

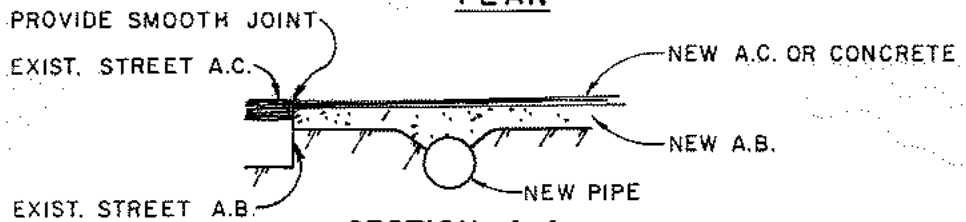
STRUCTURAL DESIGN SECTION
(MINIMUM)

AGGREGATE BASE — 0.35'
PRIME COAT ——— 0.10 - 0.20 GAL./SQ. YD.
ASPHALT CONCRETE - 0.13'
FOG SEAL ——— 0.10 GAL./SQ. YD.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S 13	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS ALLEY & VALLEY GUTTER	DWG. NO. 18



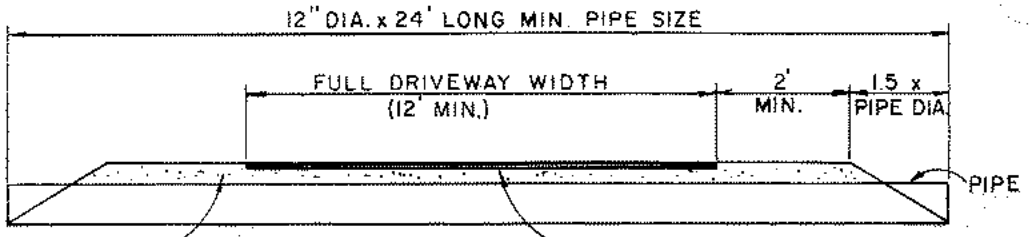
PLAN



SECTION A-A

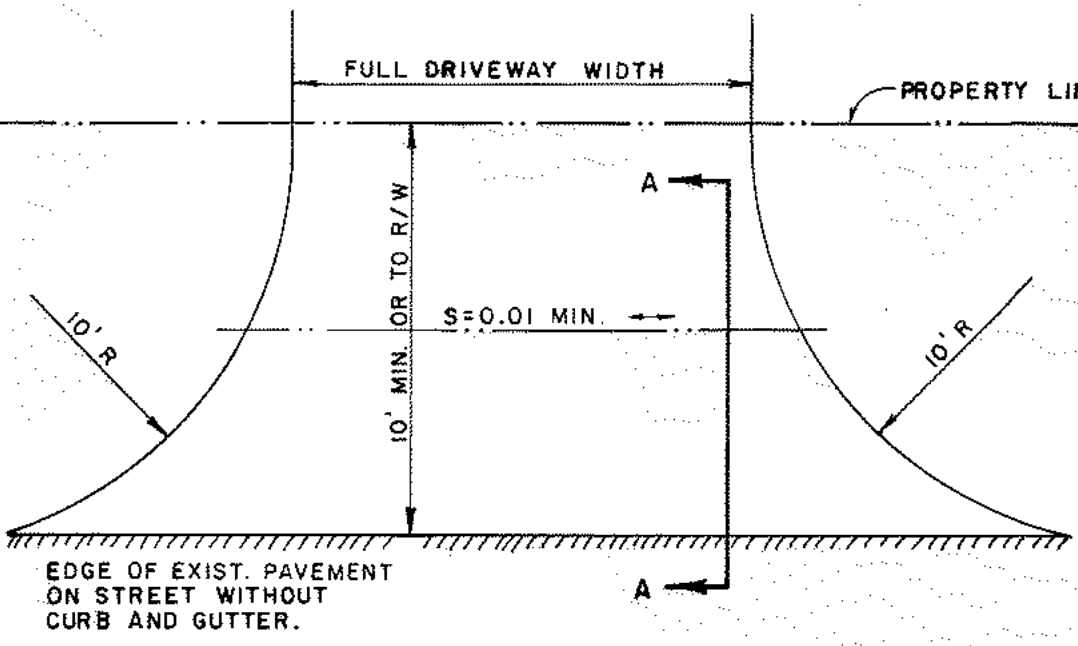
NOTES:

1. REFER TO CITY STANDARD G3 FOR PIPE BACKFILL REQUIREMENTS.
2. CONCRETE SHALL BE CLASS "B" P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

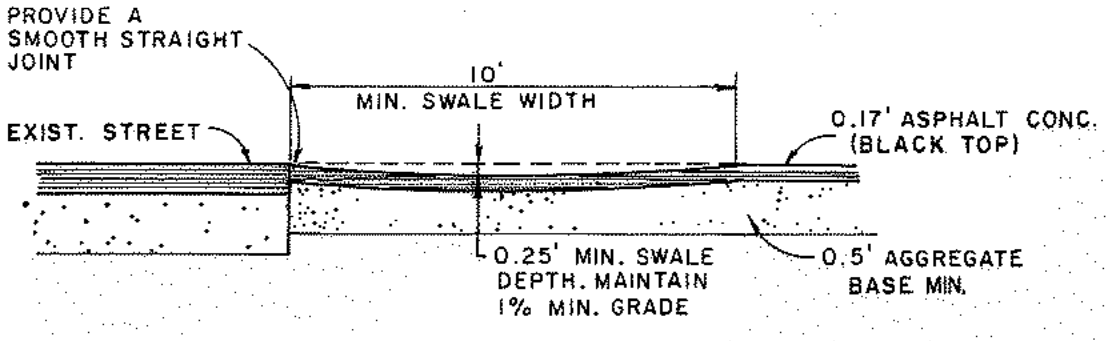


TYPICAL SECTION

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S14	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD DRIVEWAY CULVERT	DWG. NO. 19

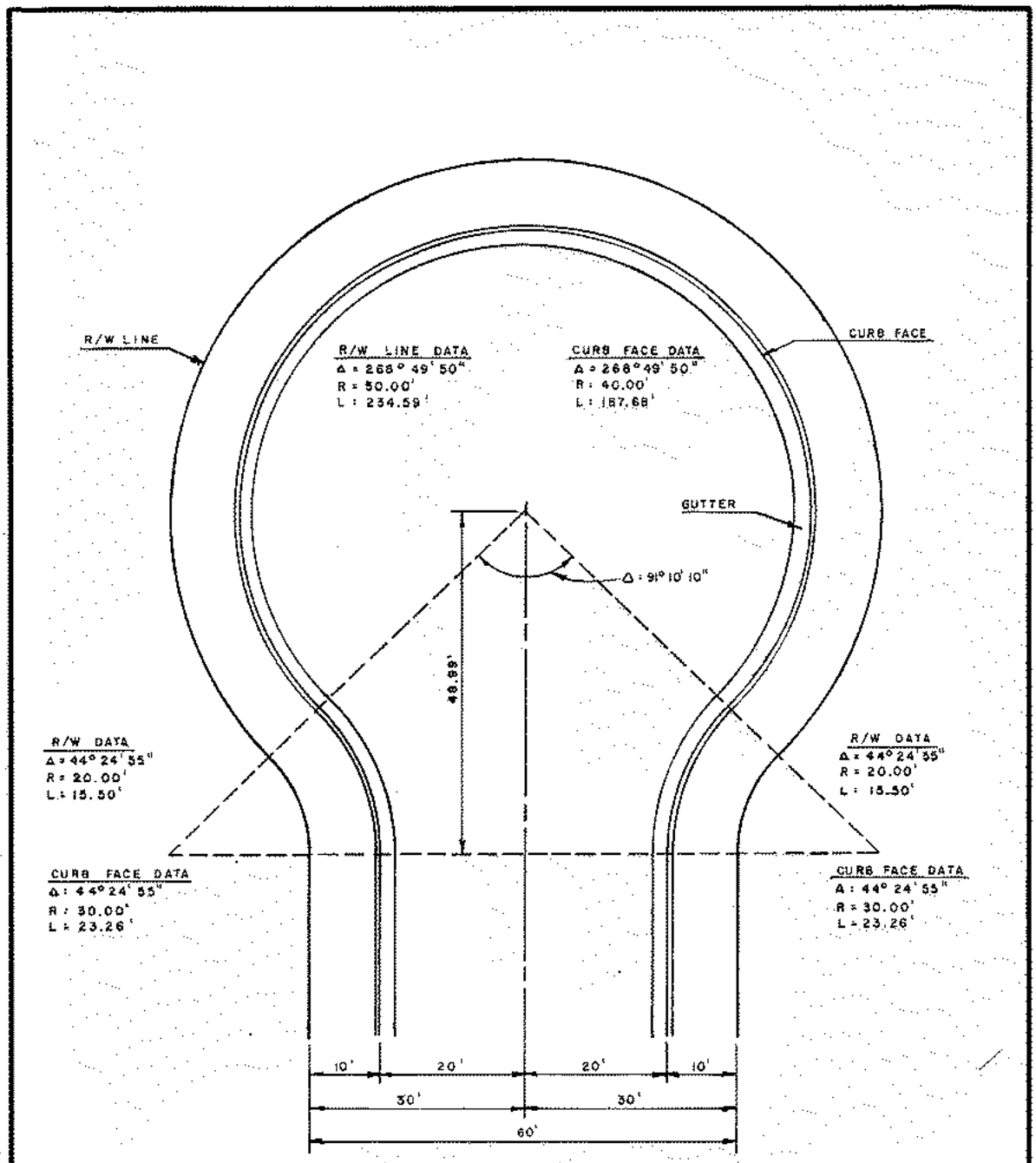


PLAN

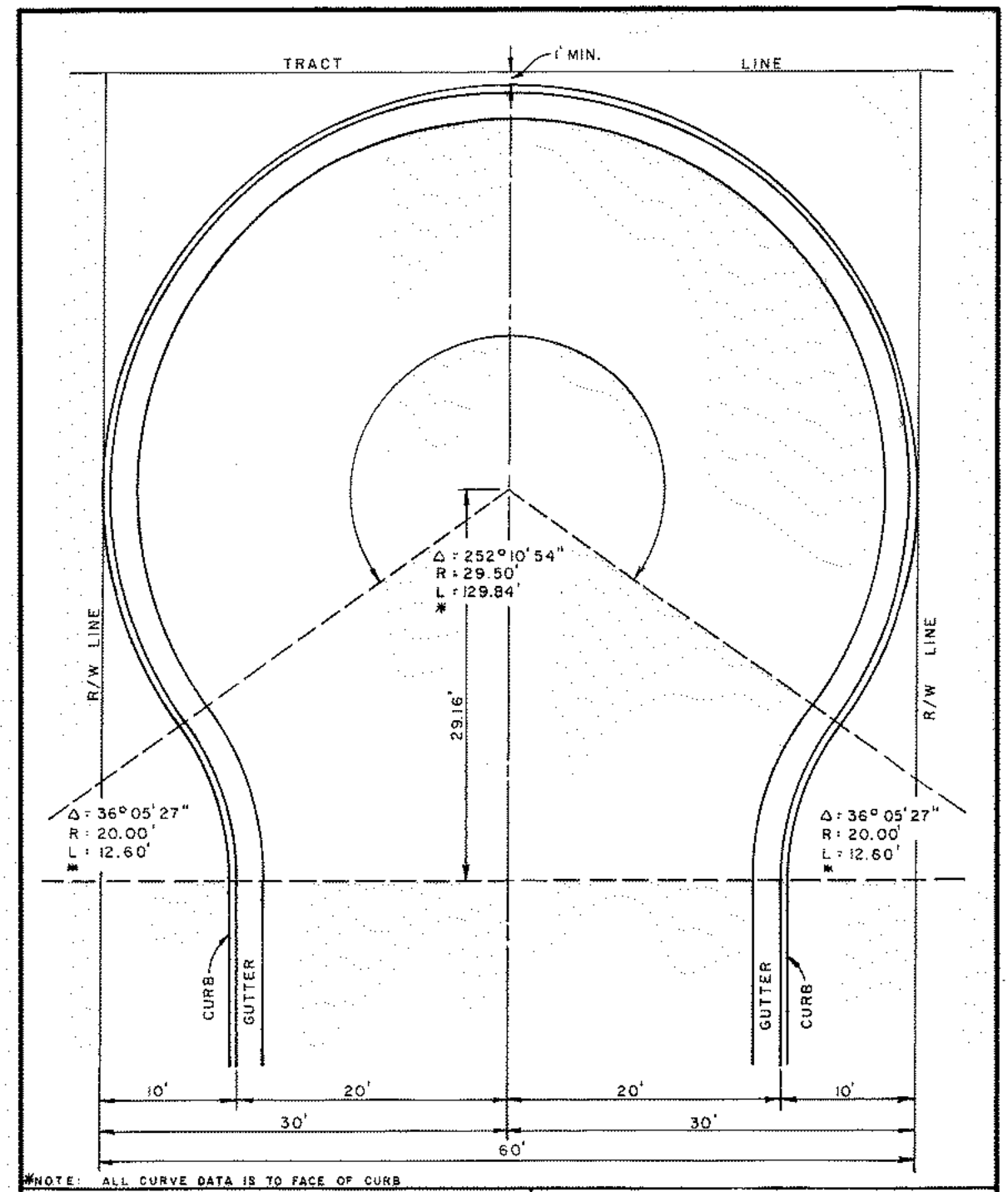


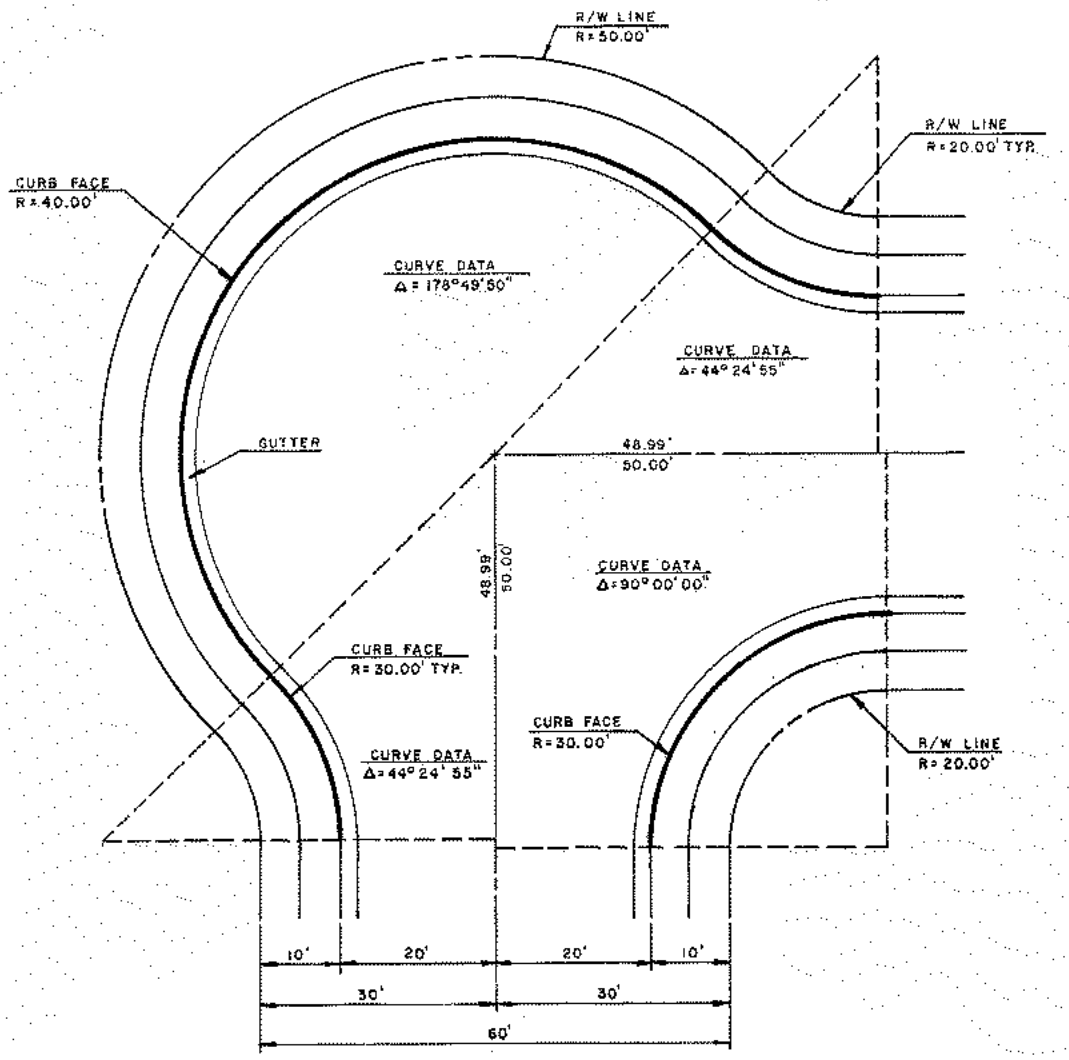
SECTION A-A

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S15	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS DRIVEWAY APPROACH SWALE	DWG. NO. 20



APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S16
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD CUL-DE-SAC
	DWG. NO. 21

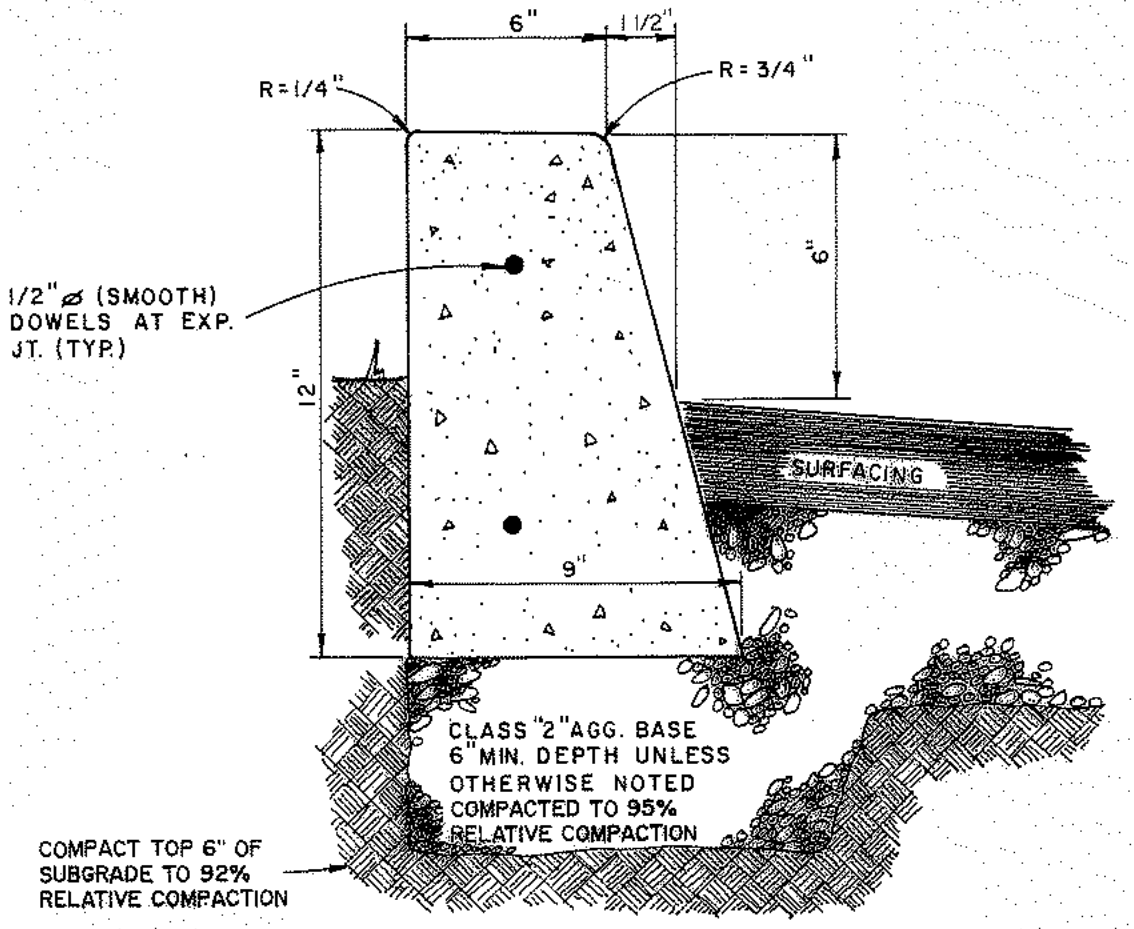

TRACT
1' MIN.
LINE
Δ = 252° 10' 54"
R = 29.50'
L = 129.84'
*
R/W LINE
29.16'
R/W LINE
Δ = 36° 05' 27"
R = 20.00'
L = 12.60'
*
Δ = 36° 05' 27"
R = 20.00'
L = 12.60'
*
CURB
GUTTER
GUTTER
CURB
10'
20'
20'
10'
30'
30'
60'
*NOTE: ALL CURVE DATA IS TO FACE OF CURB
APPROVED BY CITY COUNCIL
RESOLUTION NO 50
DATE: SEPTEMBER 16, 1991
PUBLIC WORKS
STANDARD NO S 17
DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rollo 18036
CITY ENGINEER RCE NO.
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TEMPORARY CUL-DE-SAC
DWG. NO.
22



NOTE: HANDICAPPED RAMP LOCATIONS TO BE DETERMINED BY THE CITY ENGINEER.

SCALE: 1"=20'

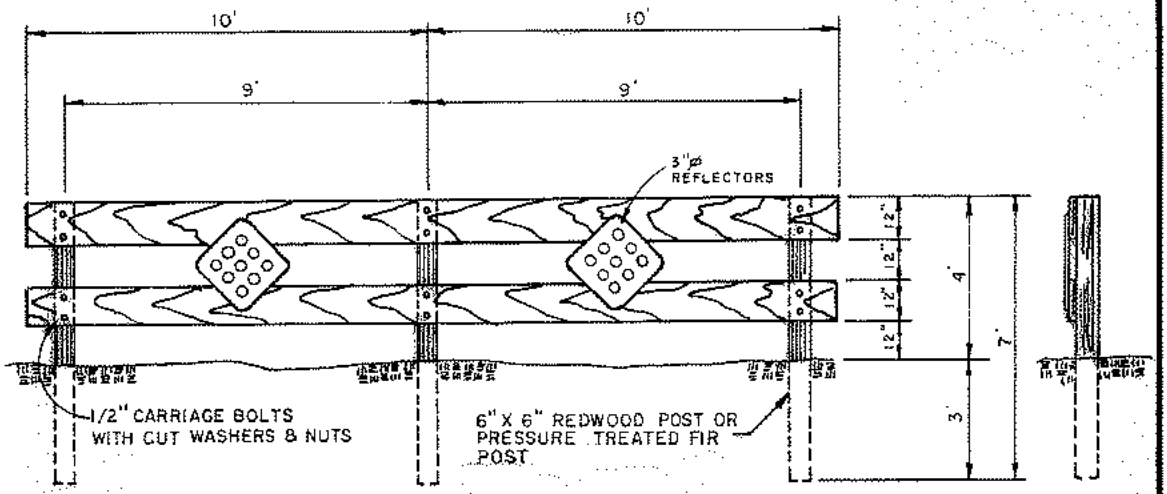
APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S18
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS CURVE "KNUCKLE"
	DWG. NO. 23



NOTES:

1. THIS SECTION TO BE USED ONLY FOR PARKING LOTS OR AS APPROVED BY THE ENGINEER.
2. CONCRETE SHALL BE CLASS B, 4" MAX. SLUMP -40.5 LIN. FT. PER CUBIC YARD.
3. PROVIDE 1/2" FULL DEPTH EXPANSION JOINTS AT 20' O.C. MAX. W/ 2-1/2" Ø x 24" (SMOOTH) DOWELS AT EACH JOINT.
4. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S19	
DES: ____ DWN: L.R.W. CHK: ____ DATE: ____ APPROVED: Ray D. Rees 18036 CITY ENGINEER RCE NO	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS PARKING CURB	DWG. NO. 24

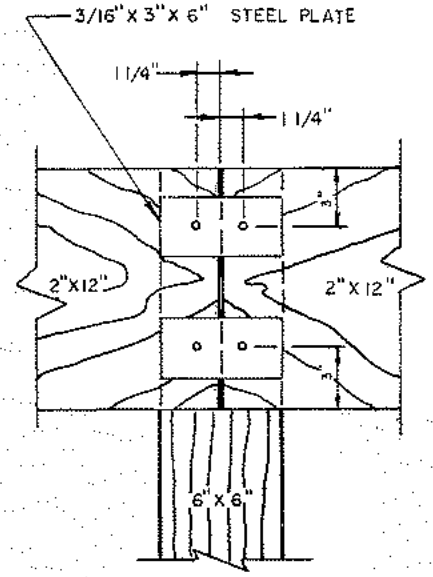


MATERIALS LIST:

- 2 — 2" X 12" X 20' (NO.2 AND BETTER DOUGLAS FIR)
- 3 — 6" X 6" X 7' ('A' AND BETTER OR PRESSURE TREATED FIR)
- 2 — 18" X 18" REFLECTORS (TYPE N-4)

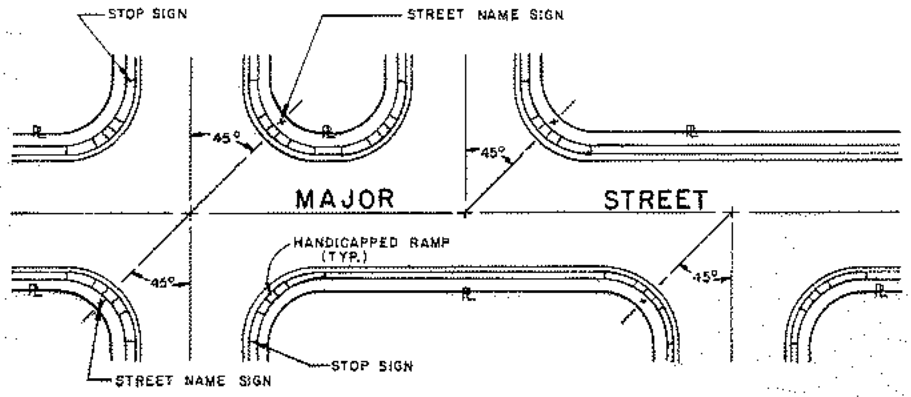
NOTES:

1. BARRICADES TO BE ERECTED AT EACH STREET TERMINAL IN ACCORDANCE WITH THE SPECIFICATIONS.
2. ALL LUMBER TO BE S4S.
3. ALL EXPOSED SURFACES TO BE PAINTED WITH TWO COATS OF WHITE EXTERIOR GRADE PAINT.
4. BARRICADE INSTALLATION SHOWN IS TO BE USED FOR STREETS HAVING CURB TO CURB WIDTHS UP TO 40 FEET. WHERE A WIDER WIDTH OF BARRICADE IS REQUIRED, IT SHALL BE MADE IN 10 FEET MULTIPLES OF THE ABOVE UNIT.



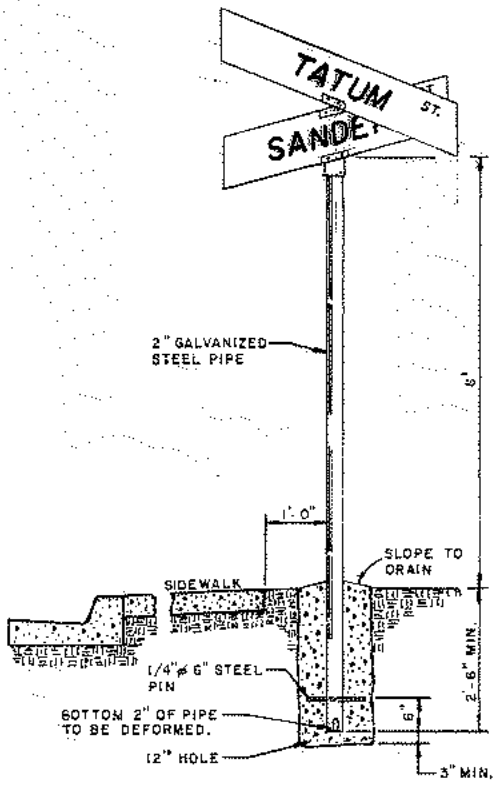
DETAIL OF BUTT JDINT

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S20
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D Rels 18056 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD BARRICADE
	DWG. NO. 25



TYPICAL SIGN LOCATIONS

FOR 30' CURB RADII AT 90° INTERSECTIONS



STREET NAME SIGN ASSEMBLY & INSTALLATION

MINIMUM SIGN SPECIFICATIONS

INTEGRAL STREET NAME—NUMBER SIGN TO BE HAWKINS-HAWKINS NO. (HD)PL-202P OR EQUAL. PLATE COVERINGS, LETTERS, AND NUMBERS SHALL BE SCOTCHLITE REFLECTIVE SHEETING, ENGINEERING GRADE:

PLATES: FB-118 (GREEN)
LETTERS, NUMBERS: SM-C) (SILVER-WHITE)
4" LETTERS
2" ABBREVIATIONS

RESIDENTIAL PLATES ARE 6" HIGH
MAXIMUM LETTERS PER NAME:
ONE WORD - 12 LETTERS
TWO WORD - 10 LETTERS

NOTES:

1. ALL VARIANCES IN SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.
2. STREET SIGN TO BE LOCATED ON THE NEAR RIGHT SIDE OF THE INTERSECTION OF THE MAJOR STREET.
3. ALLOWABLE ABBREVIATIONS TO BE USED ON STREET NAME SIGNS ARE AS FOLLOWS:

BOULEVARD	BL	DRIVE	DR
STREET	ST	ROAD	RD
AVENUE	AV	LANE	LN
PLACE	PL	COURT	CT
CIRCLE	CR	WAY	WY

4. STREET NAME SIGNS IN RESIDENTIAL AREAS SHALL BE INSTALLED 1'-0" FROM BACK EDGE OF SIDEWALK.
5. STREET NAME SIGNS IN COMMERCIAL AREAS SHALL BE INSTALLED IN THE SIDEWALK, 1'-0" FROM THE PROPERTY LINE.
6. STOP SIGN STANDARDS SHALL BE LOCATED AT THE CURB RETURN, AND SHALL BE SET 1'-0" FROM THE BACK OF CURB UNLESS THE ENGINEER DETERMINES THAT THE STOP SIGN AND STREET NAME SIGN SHALL BE INCORPORATED ON ONE STANDARD WHICH WILL BE LOCATED AS PER NOTE 2. STOP SIGNS SHALL BE 30" MINIMUM.
7. STOP BARS SHALL BE INSTALLED AT LOCATIONS DETERMINED BY THE CITY ENGINEER.

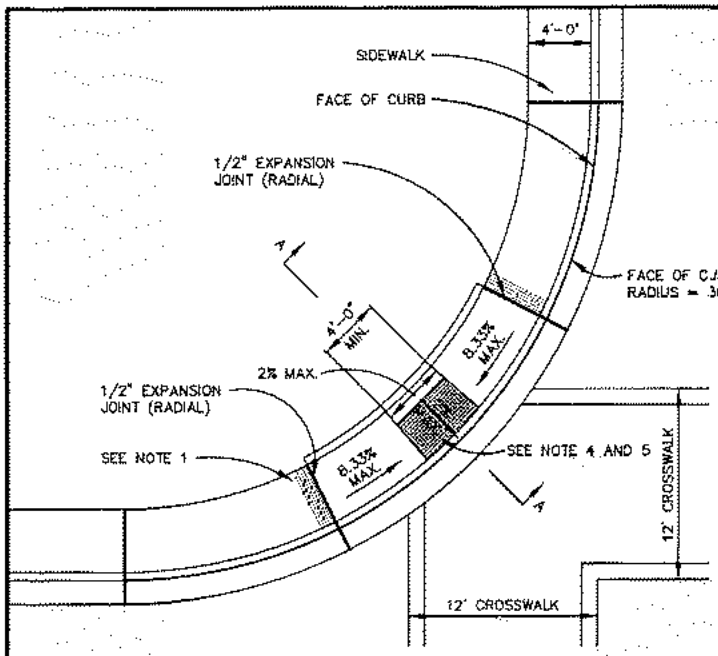
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS STANDARD NO S21

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED: Ray D. Rile 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
STREET NAME SIGN & INSTALLATION

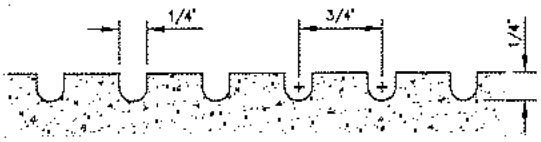
DWG. NO. 26



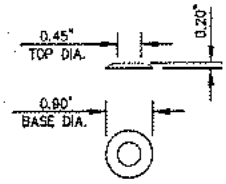
PLAN
SCALE 1" = 10'

NOTES:

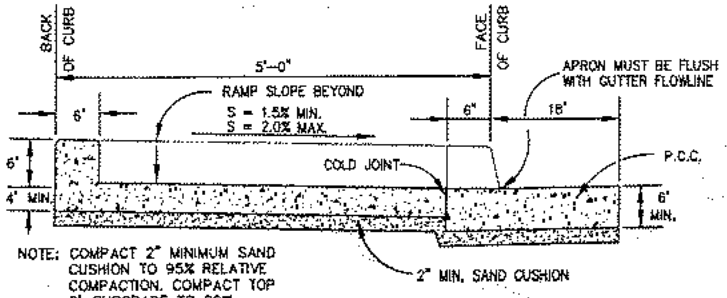
1. THE CURB RAMP SHALL BE OUTLINED, AS SHOWN, WITH A 1'-0" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" ON CENTER (SEE GROOVING DETAIL). THE GROOVED BORDER MUST BE ON THE LEVEL SURFACE AT THE TOP OF THE RAMP.
2. TRANSITIONS FROM RAMPS AND LANDING TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
3. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 4'-0" OF THE TOP AND BOTTOM OF THE CURB RAMP.
4. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE DETAILS ON THIS PLAN.
5. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
6. ALL CONCRETE SHALL BE CLASS "B" P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.



GRODVING DETAIL
NO SCALE

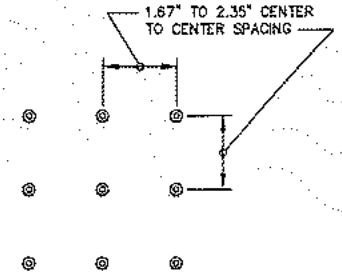


RAISED TRUNCATED DDME
NO SCALE



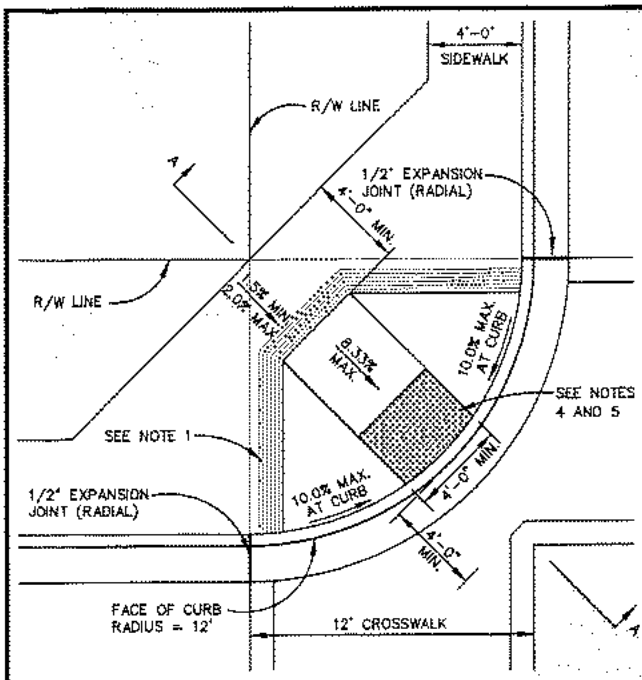
NOTE: COMPACT 2" MINIMUM SAND CUSHION TO 95% RELATIVE COMPACTION. COMPACT TOP 6" SUBGRADE TO 92% RELATIVE COMPACTION.

SECTION A-A
NO SCALE



RAISED TRUNCATED DDME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE
NO SCALE

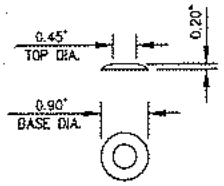
APPROVED BY CITY COUNCIL RESOLUTION NO. 2008-R-055 DATE: AUGUST 18, 2008	PUBLIC WORKS STANDARD NO. S22
DES: H.L.V. DRWN: P.W.R. CHK: B.A.N. DATE: JULY 2008 APPROVED: Bruce A. Nash 33381 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS TYPE 1 HANDICAPPED RAMP
	DWG. NO. 27



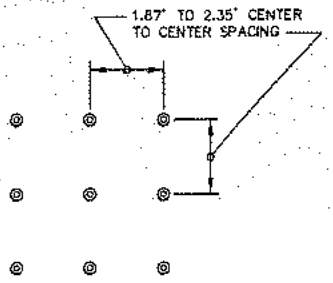
PLAN
NO SCALE

NOTES:

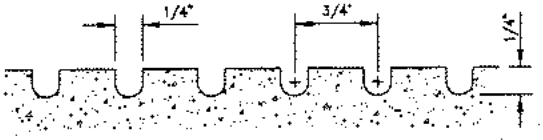
1. THE CURB RAMP SHALL BE OUTLINED, AS SHOWN, WITH A 1'-0" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" ON CENTER (SEE GROOVING DETAIL). THE GROOVED BORDER MUST BE ON THE LEVEL SURFACE AT THE TOP OF THE RAMP.
2. TRANSITIONS FROM RAMPS AND LANDING TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
3. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 4'-0" OF THE TOP AND BOTTOM OF THE CURB RAMP.
4. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE DETAILS ON THIS PLAN.
5. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
6. ALL CONCRETE SHALL BE CLASS "B" P.C.C. WITH LAMP BLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.



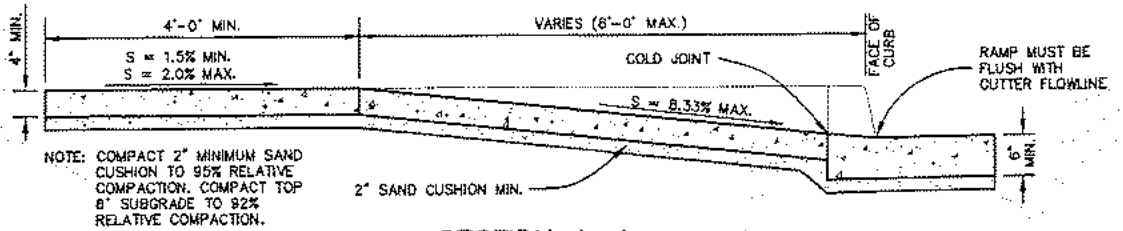
RAISED TRUNCATED DDME
NO SCALE



RAISED TRUNCATED DDME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE
NO SCALE

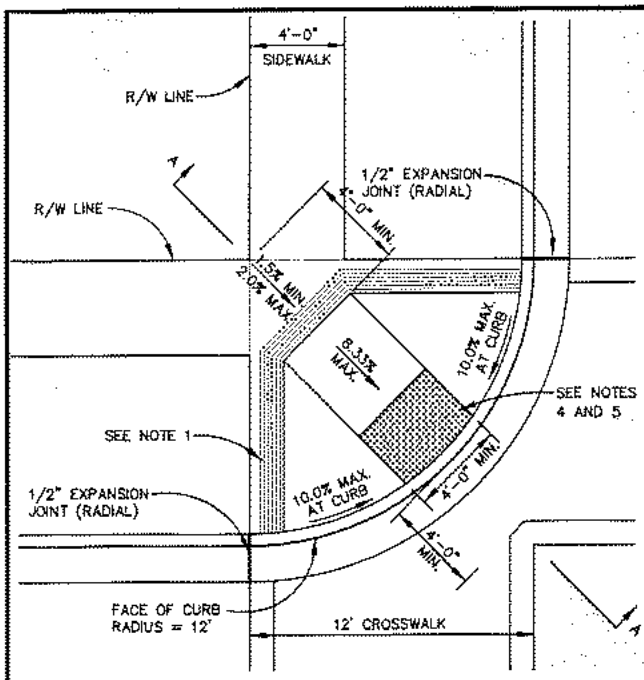


GROOVING DETAIL
NO SCALE



SECTION A-A
NO SCALE

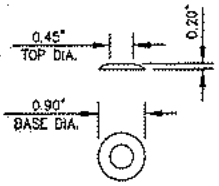
APPROVED BY CITY COUNCIL RESOLUTION NO. 2008-R-055 DATE: AUGUST 18, 2008	PUBLIC WORKS STANDARD NO. S23
DES: H.L.V. DRWN: P.W.R. CHK: B.A.N. DATE: JULY 2008 APPROVED: Bruce A. Nash 33381 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS TYPE 2 HANDICAPPED RAMP
	DWG. NO. 28



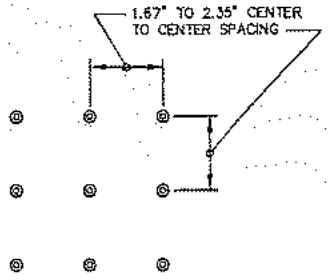
PLAN
NO SCALE

NOTES:

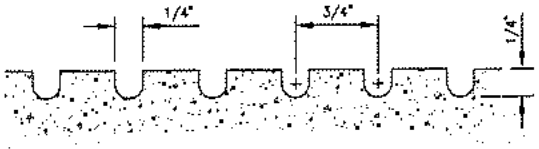
1. THE CURB RAMP SHALL BE OUTLINED, AS SHOWN, WITH A 1'-0" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" ON CENTER (SEE GROOVING DETAIL). THE GROOVED BORDER MUST BE ON THE LEVEL SURFACE AT THE TOP OF THE RAMP.
2. TRANSITIONS FROM RAMPS AND LANDING TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
3. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 4'-0" OF THE TOP AND BOTTOM OF THE CURB RAMP.
4. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE DETAILS ON THIS PLAN.
5. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
6. ALL CONCRETE SHALL BE CLASS "B" P.C.C. WITH LAMP BLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.



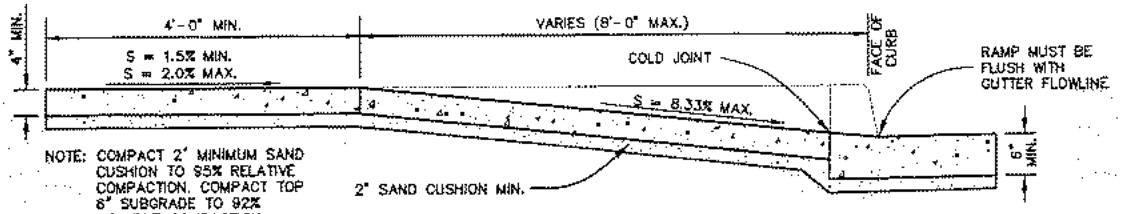
RAISED TRUNCATED DOME
NO SCALE



RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE
NO SCALE

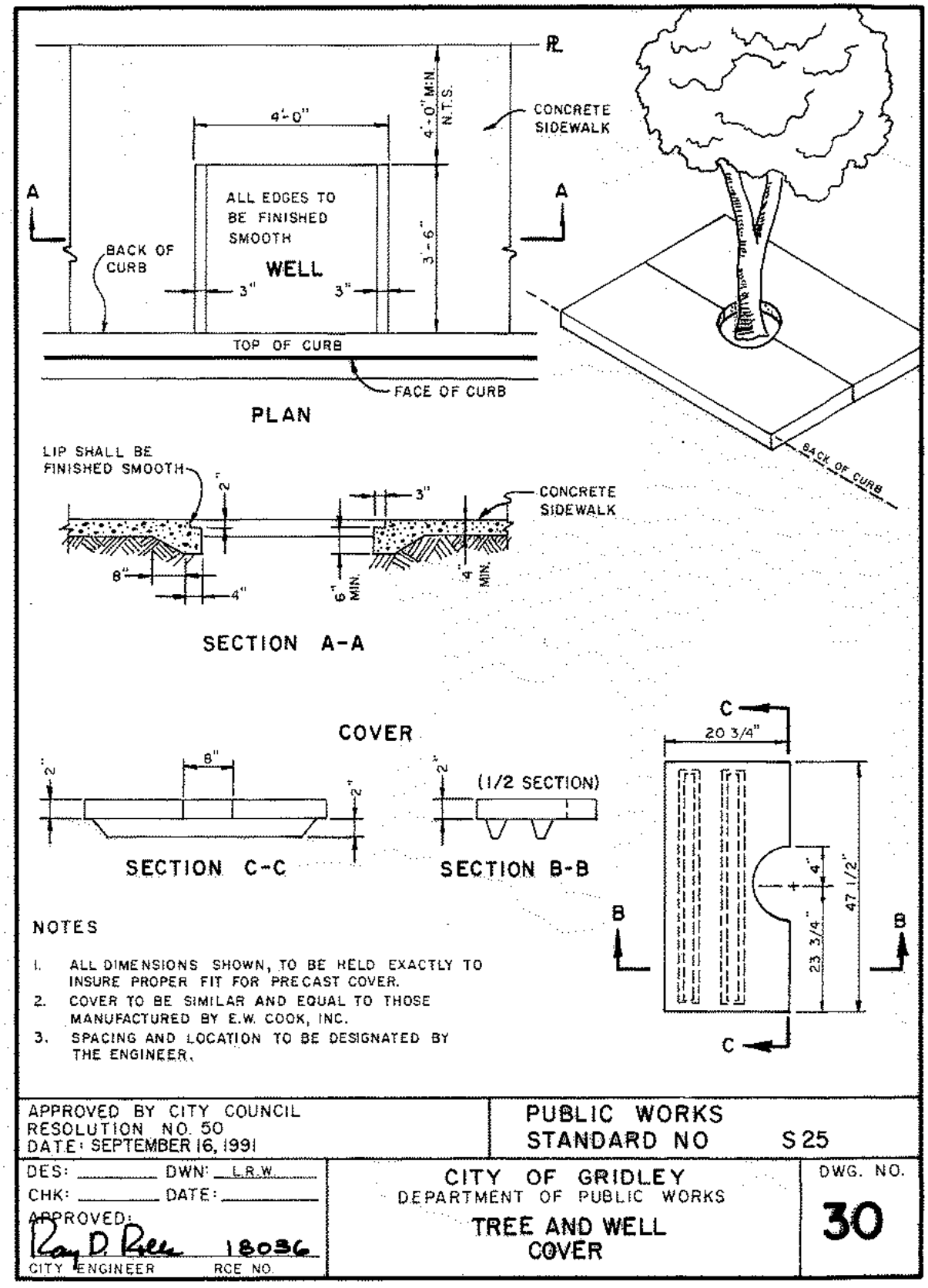


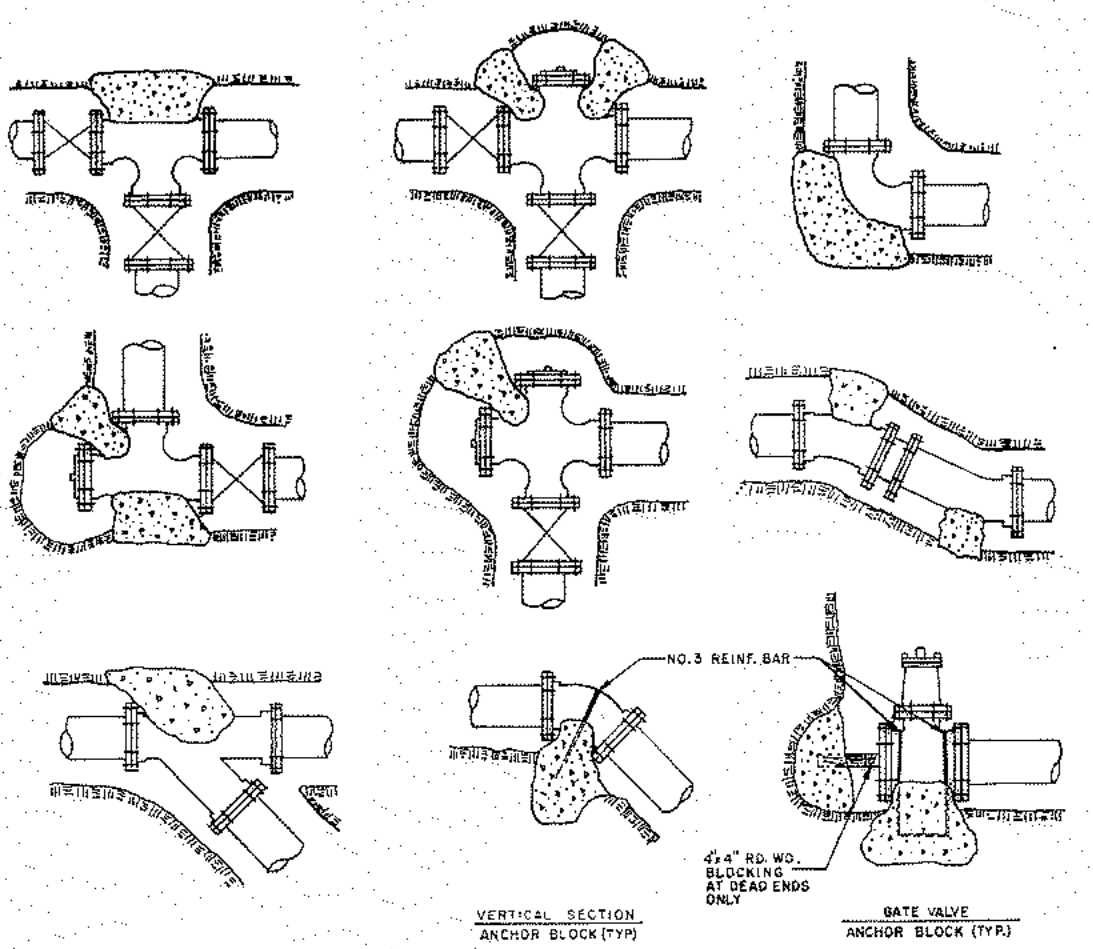
GROOVING DETAIL
NO SCALE



SECTION A-A
NO SCALE

APPROVED BY CITY COUNCIL RESOLUTION NO. 2008-R-055 DATE: AUGUST 18, 2008	PUBLIC WORKS STANDARD NO. S24
DES: H.L.V. DRWN: P.W.R. CHK: B.A.N. DATE: JULY 2008 APPROVED: Bruce A. Nack 33381 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS TYPE 3 HANDICAPPED RAMP
	DWG. NO. 29


PL
4'-0" MIN.
N.T.S.
4'-0"
CONCRETE SIDEWALK
A
A
ALL EDGES TO BE FINISHED SMOOTH
WELL
BACK OF CURB
3'-6"
3"
3"
TOP OF CURB
FACE OF CURB
PLAN
BACK OF CURB
LIP SHALL BE FINISHED SMOOTH
2"
3"
CONCRETE SIDEWALK
8"
4"
6" MIN.
4" MIN.
SECTION A-A
COVER
8"
2"
2"
SECTION C-C
2"
(1/2 SECTION)
SECTION B-B
C
20 3/4"
B
B
4"
47 1/2"
23 3/4"
C
NOTES
1. ALL DIMENSIONS SHOWN, TO BE HELD EXACTLY TO INSURE PROPER FIT FOR PRECAST COVER.
2. COVER TO BE SIMILAR AND EQUAL TO THOSE MANUFACTURED BY E.W. COOK, INC.
3. SPACING AND LOCATION TO BE DESIGNATED BY THE ENGINEER.
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991
PUBLIC WORKS
STANDARD NO S 25
DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rees 18036
CITY ENGINEER RCE NO.
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TREE AND WELL COVER
DWG. NO.
30



NOTES:

1. THRUST BLOCKS SHALL BE CONSTRUCTED SO THAT THE BEARING SURFACE IS IN A DIRECT LINE WITH THE MAJOR FORCE CREATED BY THE PIPE OR FITTING.
2. ALL CONCRETE SHALL BE CLASS C P.C.C.
3. CONCRETE SHALL BE FLUID ENOUGH SO THAT IT MAY BE WORKED AROUND THE FITTING.
4. CONCRETE SHALL BE KEPT BEHIND THE BELL OF THE FITTING AND AWAY FROM BOLTS AND FITTINGS.
5. THRUST BLOCK BEARING SURFACE SHALL BE PLACED AGAINST UNDISTURBED EARTH AND SHALL HAVE A MINIMUM VOLUME OF 6 CU. FT. AND A MINIMUM BEARING AREA OF 1 SQ. FT. PER INCH OF DIAMETER. PIPES LARGER THAN 10" REQUIRE SPECIAL DESIGN.
6. A CONCRETE PAD SHALL BE POURED UNDER ALL VALVES 12" OR LARGER, OR AS DIRECTED BY THE ENGINEER.
7. ALL ANCHOR BLOCK SHALL BE CONSTRUCTED AS SPECIFIED, SIZE OF BLOCK AND NUMBER OF STRAPS TO BE DESIGNED IN EACH SITUATION.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

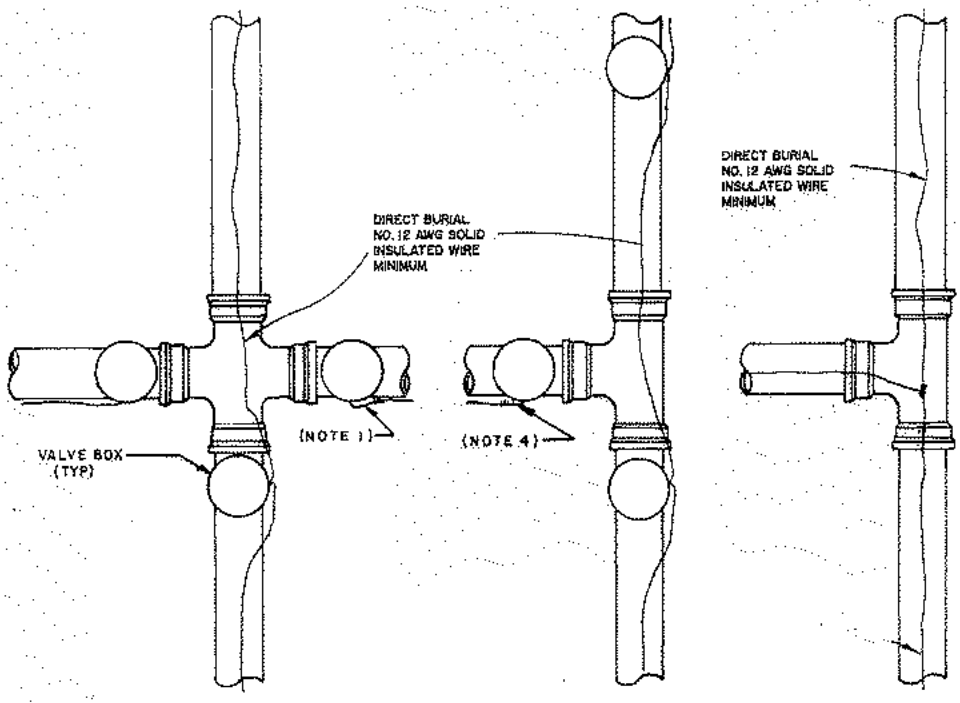
PUBLIC WORKS
STANDARD NO W1

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rollo 18036
CITY ENGINEER RCE NO.

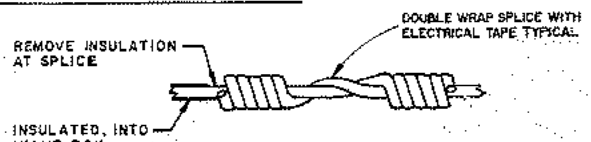
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

TYPICAL THRUST BLOCKS AND ANCHOR DETAILS

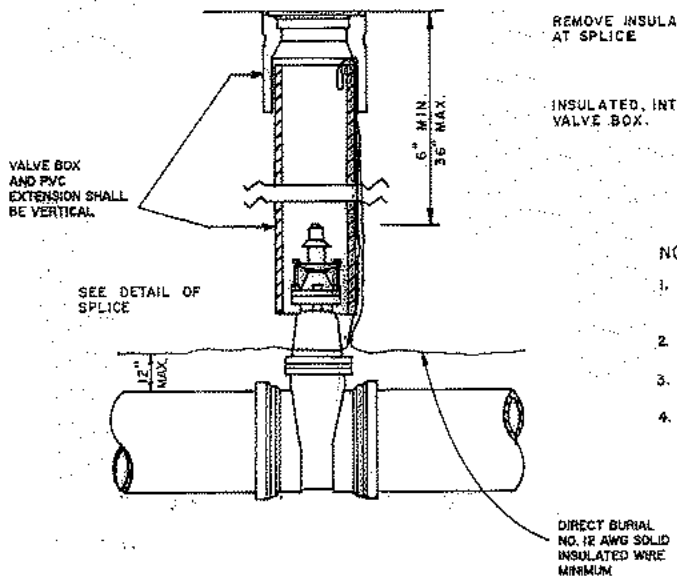
DWG. NO. 31



TYPICAL PLACING AT MAIN INTERSECTIONS



DETAIL OF SPLICE

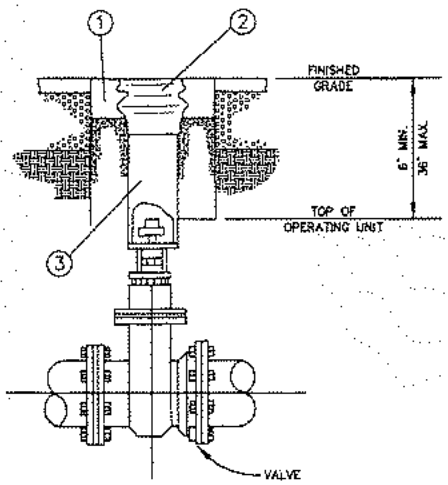


INSTALLATION AT VALVE BOX

NOTES:

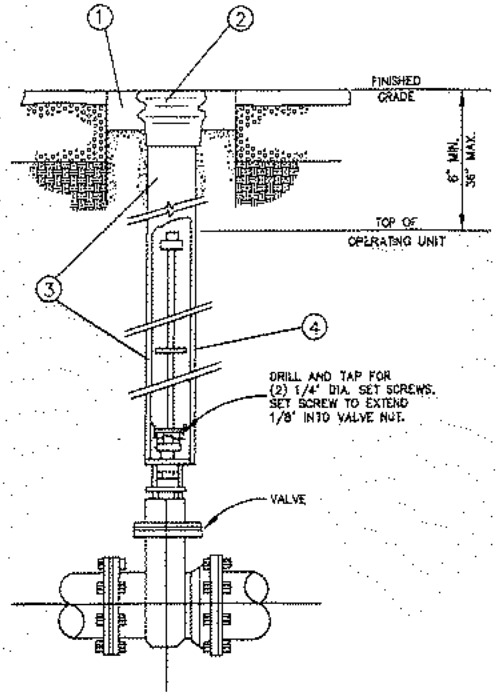
1. WIRE TO BE CONTINUOUS BETWEEN VALVE BOXES, EXCEPT WHERE BOXES ARE WITHIN 10' OF PIPE INTERSECTION.
2. DETECTION RISERS SHALL BE INSTALLED AT 800' INTERVALS MAXIMUM.
3. LOCATING WIRE TO BE LAID AT THE TOP OF THE PIPE BEDDING ENVELOPE. SEE CITY STD. G5.
4. IF WIRE ENDS AT VALVE BOX, RUN SINGLE INSULATOR LEAD UP TO 1" BELOW BOX COVER.

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO W2	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS LOCATING WIRE FOR NONMETALLIC PIPELINES	DWG. NO. 32



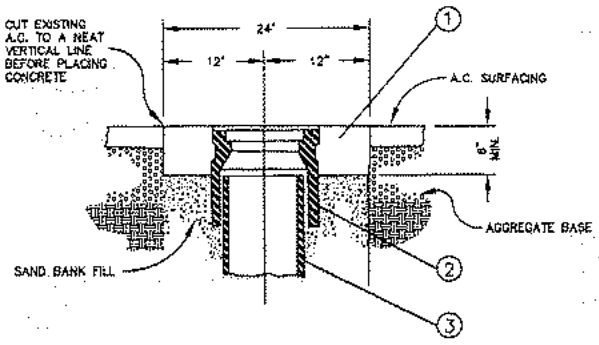
VALVE COVER DETAIL

WHERE DISTANCE BETWEEN FINISHED GRADE AND TOP OF OPERATING NUT IS 36" OR LESS



OPERATING NUT EXTENSION DETAIL

REQUIRED WHERE DISTANCE BETWEEN FINISHED GRADE AND TOP OF OPERATING NUT EXCEEDS 36"

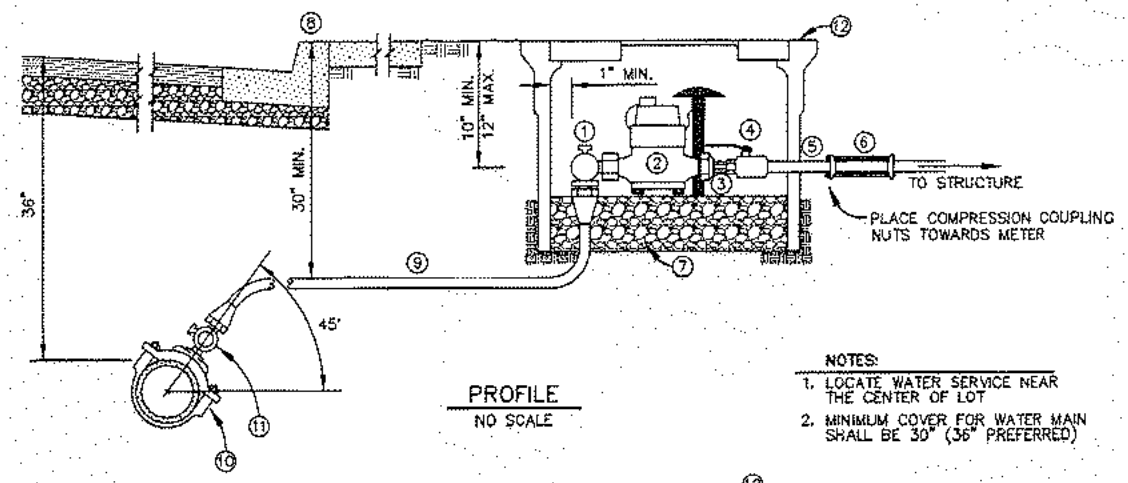


VALVE COVER ADJUSTMENT

NOTES

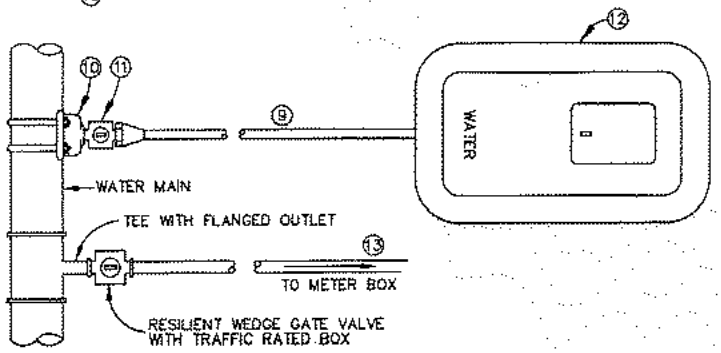
1. 24" DIA. x 6" CONCRETE COLLAR.
2. VALVE BOX COVER–BROOKS PRODUCTS (3–RT), CHRISTY G5, BES G5 OR EQUAL.
3. 8"I.D.PVC PIPE EXTENSION SHALL BE VERTICAL.
4. OPERATING NUT EXTENSION W/ 7" DIA. PLATE WASHER WELDED TO EXTENSION AT MIDPOINT OF ROD. (MIN.LENGTH OF EXTENSION ROD SHALL BE 24")

APPROVED BY CITY COUNCIL RESOLUTION NO. 2004–R–028 DATE: JULY 6, 2004	PUBLIC WORKS STANDARD NO. W3
DES: P.W.R. DRWN: P.W.R. CHK: H.L.V. DATE: JUNE, 2004 APPROVED: Brian A Nash 33381 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS VALVE COVER INSTALLATION
	DWG. NO. 33



PROFILE
NO SCALE

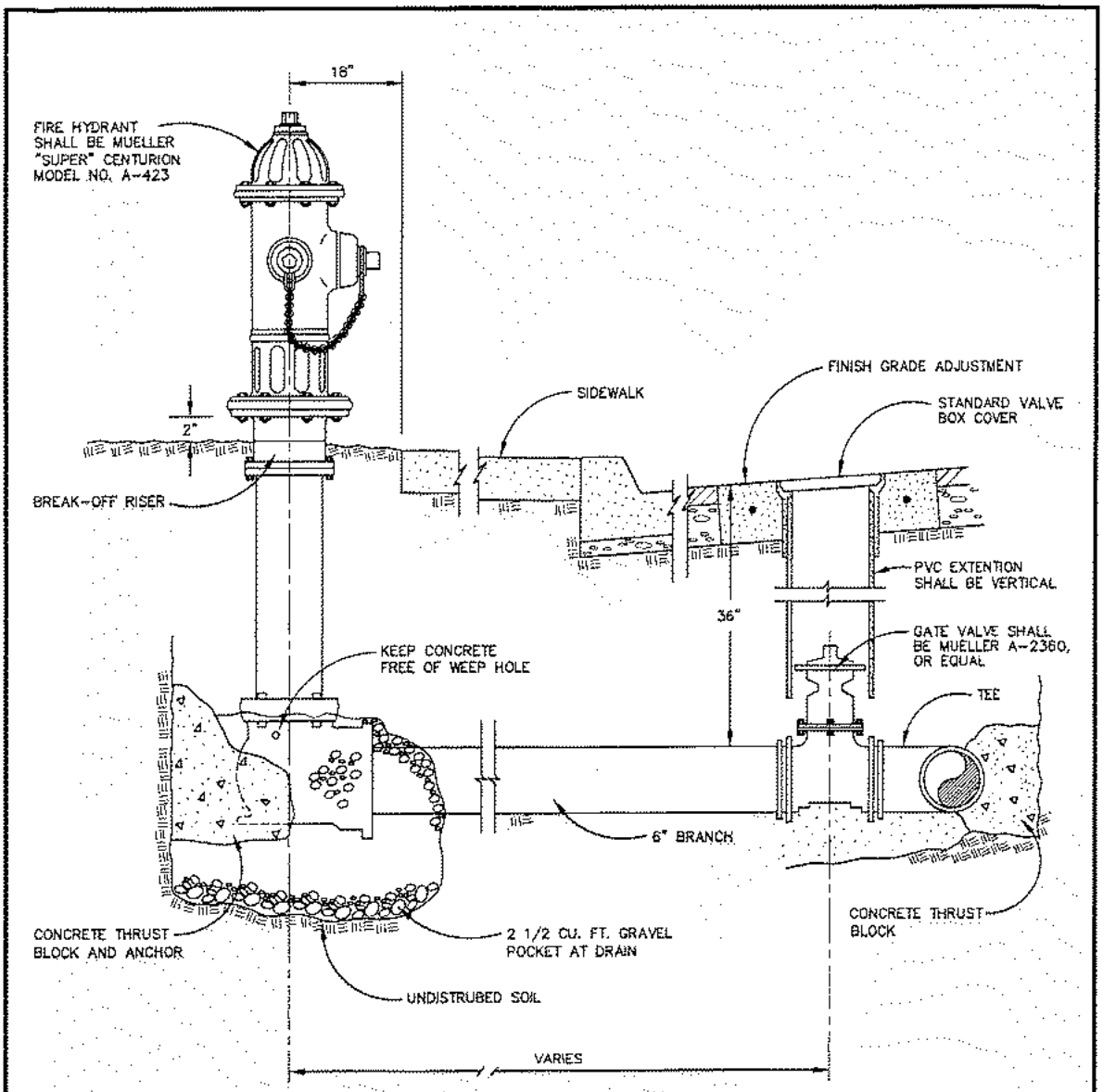
NOTES:
1. LOCATE WATER SERVICE NEAR THE CENTER OF LOT
2. MINIMUM COVER FOR WATER MAIN SHALL BE 30" (36" PREFERRED)



PLAN
NO SCALE

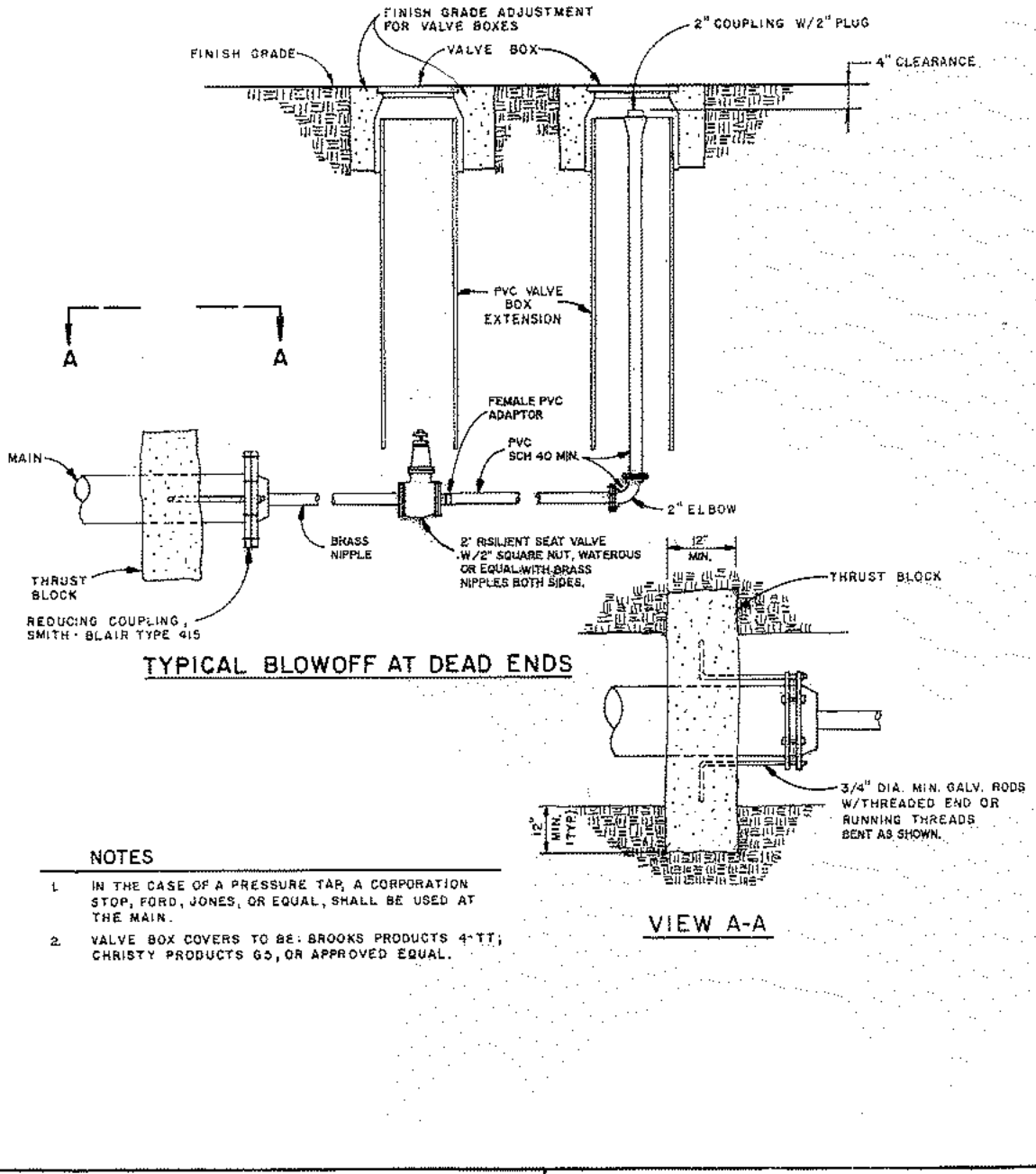
① ANGLE BALL TYPE CURB STOP (MULLER B24258 MN BY CTS 110 COMPRESSION, OR APPROVED EQUAL). FOR SERVICE LARGER THAN 2", USE RESILIENT WEDGE GATE VALVE.
② WATER METER, PIT ERT MODULE, AND UNIVERSAL ROD MOUNT ADAPTOR BY CITY OF GRIDLEY.
③ STRAIGHT METER COUPLING (FORD C38 OR APPROVED EQUAL).
④ FULL PORT BRONZE BALL VALVE (WATTS SERIES B-6080 OR APPROVED EQUAL).
⑤ 6" LONG BRASS NIPPLE, THREADED BOTH ENDS.
⑥ COMPRESSION COUPLING (ROMAC INDUSTRIES, INC. STYLE "511", SMITH BLAIR "411" TWO-BOLT STYLE OR APPROVED EQUAL).
⑦ MINIMUM 6" OF 3/4" CRUSHED ROCK
⑧ "W" STAMPED INTO THE TOP OF CURB OVER THE SERVICE LINE.
⑨ 1" DIA. PE3408 POLYETHYLENE SERVICE PIPE WITH DIRECT BURIAL NO. 12 AWG SOLID COPPER INSULATED TRACER WIRE.
⑩ FULL-BODY SUPPORT SADDLE (FORD FS 202 OR EQUAL) ON PVC C900 WATER MAIN. USE STANDARD DOUBLE STRAP SADDLE ON OTHER PIPE MATERIALS.
⑪ BALL-TYPE COMPRESSION CORPORATION STOP (MULLER B25028 MX BY CTS 110 COMPRESSION, OR APPROVED EQUAL)
⑫ FIBERLITE VALVE BOX (CHRISTY FL 30 WITH T LID) OR APPROVED EQUAL. A CONCRETE METER BOX WITH TRAFFIC LID (CHRISTY B16) OR APPROVED EQUAL SHALL BE INSTALLED IN ALL TRAFFIC AREAS.
⑬ WATER SERVICE LARGER THAN 2" SHALL BE PVC OR DUCTILE IRON PIPE WITH DIRECT BURIAL NO. 12 AWG SOLID COPPER INSULATED TRACER WIRE.

APPROVED BY CITY COUNCIL RESOLUTION NO. 2007-R-055 DATE: AUGUST 18, 2008	PUBLIC WORKS STANDARD NO. W4
DES: H.L.V. DRWN: P.W.R. CHK: B.A.N. DATE: JULY, 2008 APPROVED: Bruce A. Nash 33381 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS WATER SERVICES
	DWG. NO. 34



NOTE:
THRUST BLOCKS BEHIND TEES AND HYDRANTS SHALL PROVIDE A MINIMUM BEARING OF 4 SQ. FT. AGAINST UNDISTURBED SOIL.

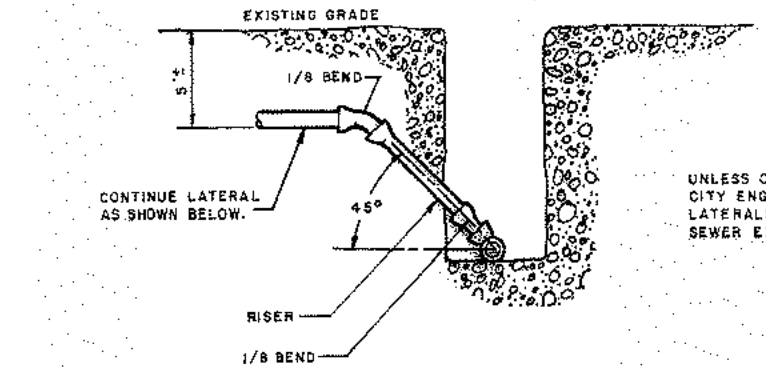
APPROVED BY CITY COUNCIL RESOLUTION NO. 2007-R-055 DATE: AUGUST 18, 2008	PUBLIC WORKS STANDARD NO. W5
DES: H.L.V. DRWN: P.W.R. CHK: B.A.N. DATE: JULY, 2008 APPROVED: Bruce A. Nash 33381 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD FIRE HYDRANT INSTALLATION
	DWG. NO. 35



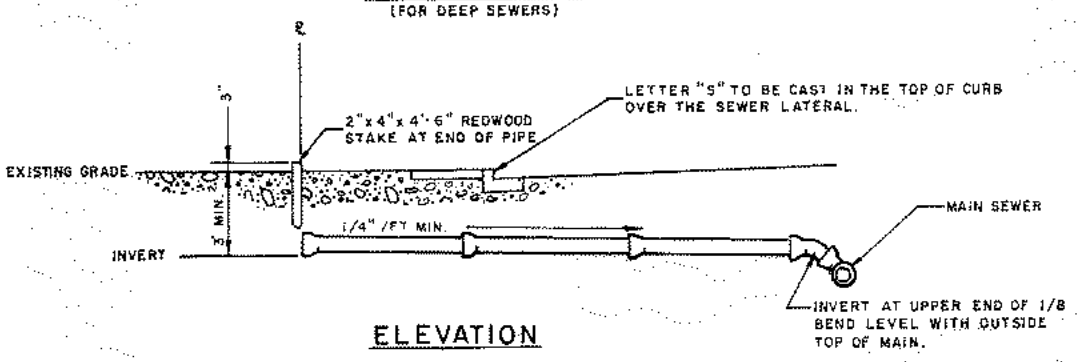
NOTES

1. IN THE CASE OF A PRESSURE TAP, A CORPORATION STOP, FORD, JONES, OR EQUAL, SHALL BE USED AT THE MAIN.
2. VALVE BOX COVERS TO BE: BROOKS PRODUCTS 4-TT; CHRISTY PRODUCTS G5, OR APPROVED EQUAL.

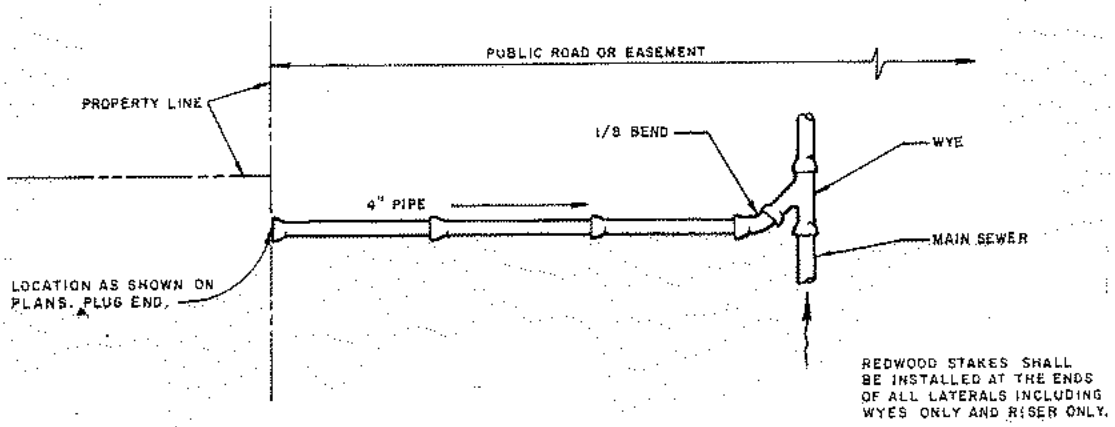
APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO W6
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS BLOWOFF ASSEMBLY
	DWG. NO. 36



RISER DETAIL
(FOR DEEP SEWERS)

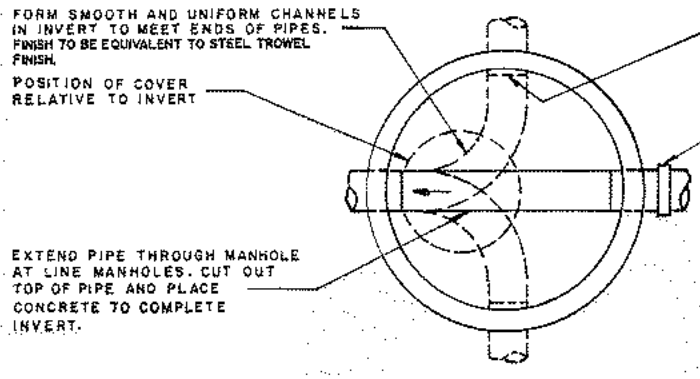


ELEVATION

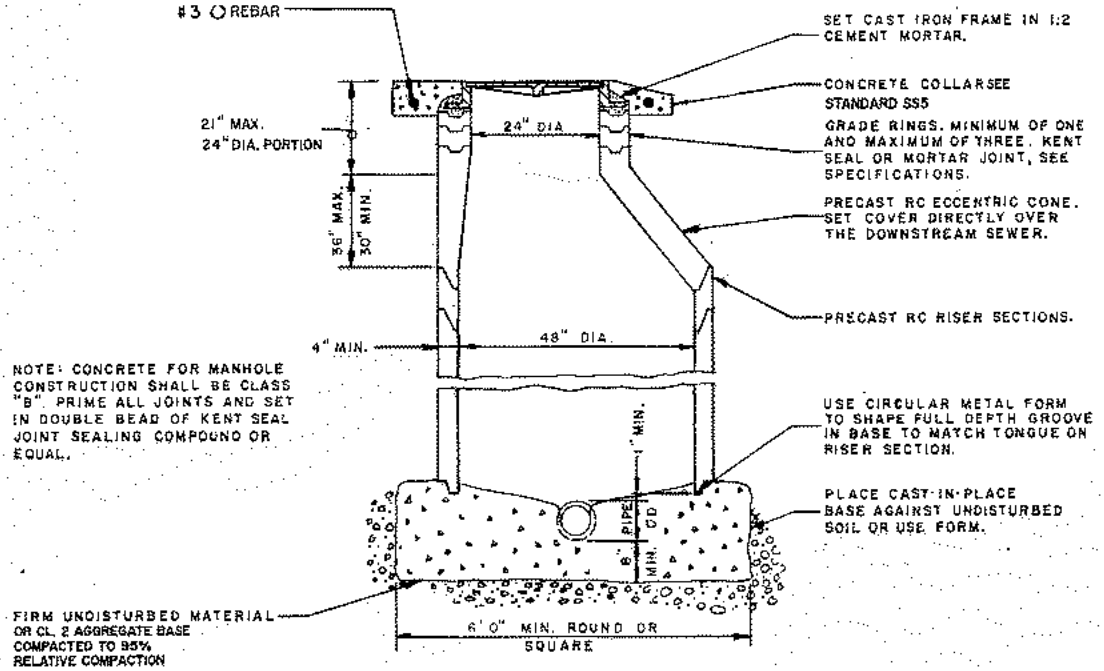


PLAN

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO SS1
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D Bell 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS TYPICAL LATERAL SEWER DETAILS
	DWG. NO. 37



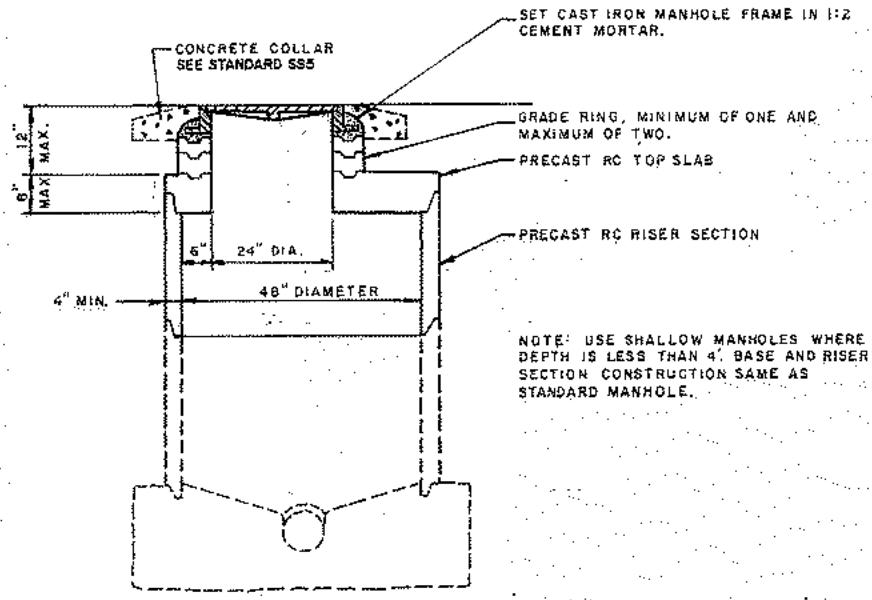
PLAN OF INVERT



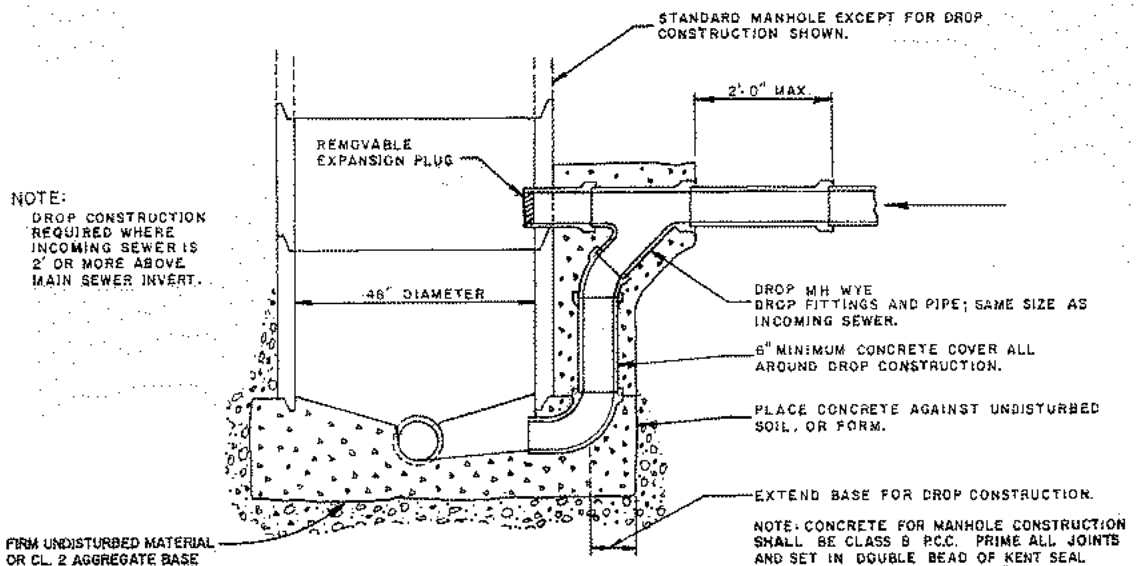
TYPICAL SECTION

INVERT SHOWN ROTATED 90°

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO SS2
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D Rose 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD MANHOLE
	DWG. NO. 38



SHALLOW MANHOLE



DROP MANHOLE CONSTRUCTION

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

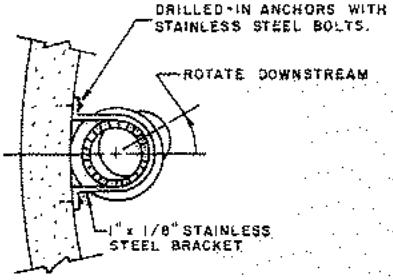
PUBLIC WORKS
STANDARD NO SS3

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rollo 18036
CITY ENGINEER RCE NO.

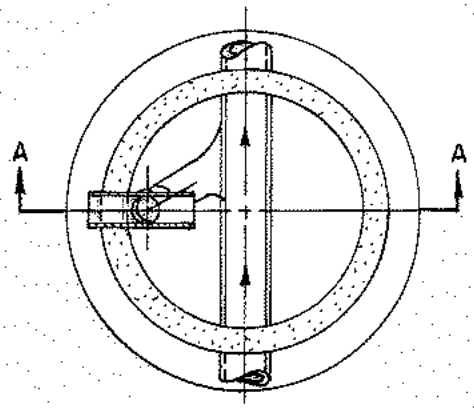
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

SHALLOW MANHOLE AND DROP MANHOLE CONSTRUCTION

DWG. NO. 39



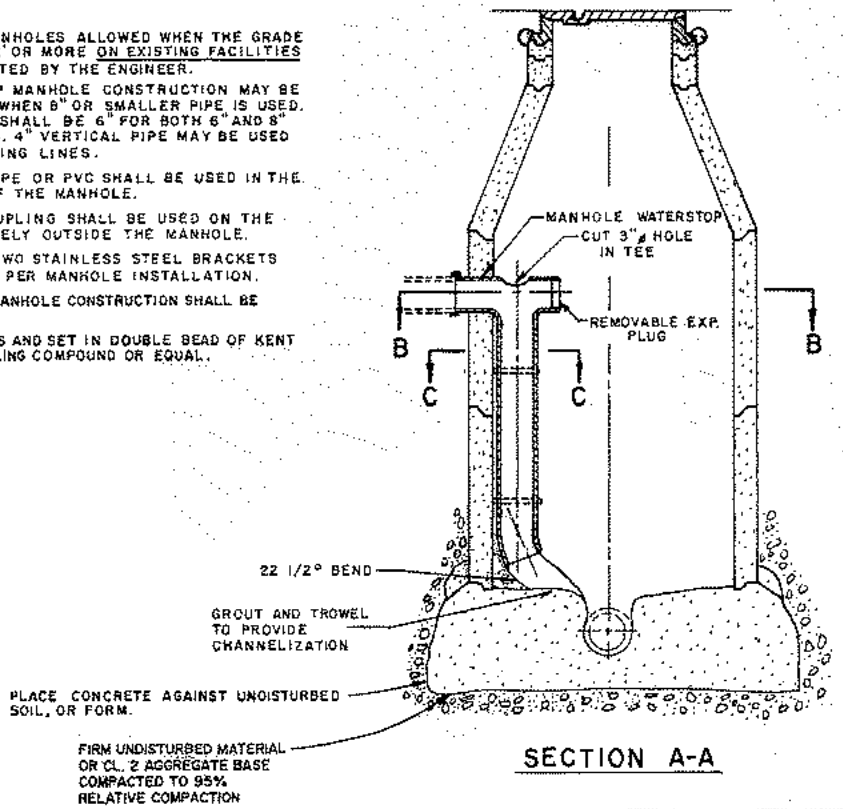
SECTION C-C



SECTION B-B

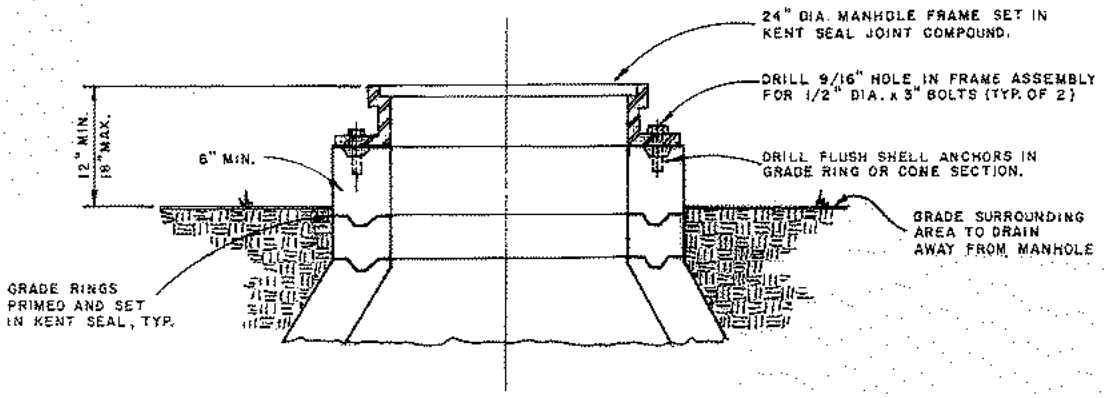
NOTES:

1. INSIDE DROP MANHOLES ALLOWED WHEN THE GRADE DIFFERENCE IS 2' OR MORE ON EXISTING FACILITIES OR WHEN DIRECTED BY THE ENGINEER.
2. THIS TYPE DROP MANHOLE CONSTRUCTION MAY BE UTILIZED ONLY WHEN 8" OR SMALLER PIPE IS USED. VERTICAL PIPE SHALL BE 6" FOR BOTH 6" AND 8" INCOMING LINES. 4" VERTICAL PIPE MAY BE USED FROM 4" INCOMING LINES.
3. DUCTILE IRON PIPE OR PVC SHALL BE USED IN THE DROP SECTION OF THE MANHOLE.
4. A FLEXIBLE COUPLING SHALL BE USED ON THE JOINT IMMEDIATELY OUTSIDE THE MANHOLE.
5. A MINIMUM OF TWO STAINLESS STEEL BRACKETS SHALL BE USED PER MANHOLE INSTALLATION.
6. CONCRETE FOR MANHOLE CONSTRUCTION SHALL BE CLASS B R.C.C.
7. PRIME ALL JOINTS AND SET IN DOUBLE BEAD OF KENT SEAL JOINT SEALING COMPOUND OR EQUAL.

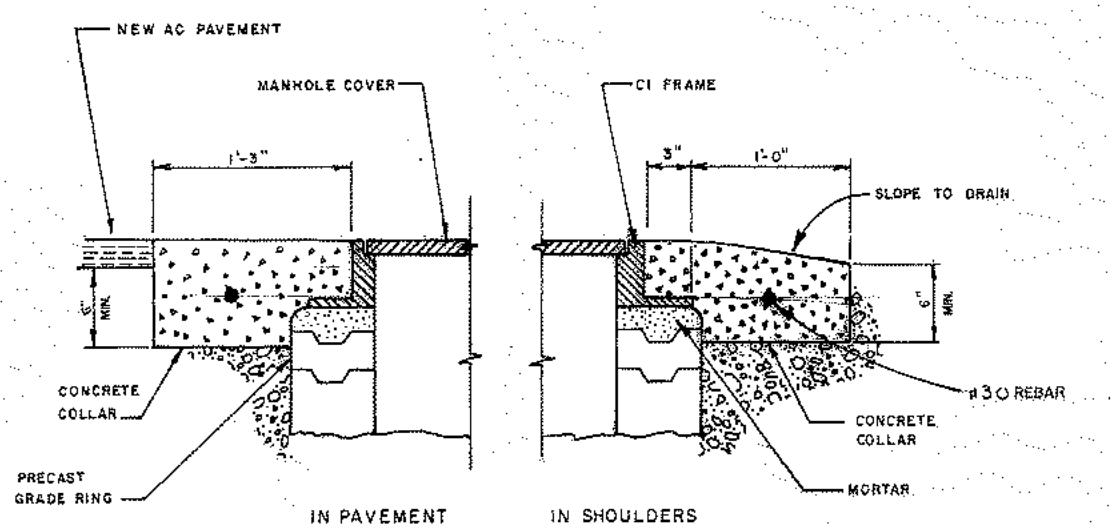


SECTION A-A

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO SS 4
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D Rall 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD INSIDE DROP MANHOLE
	DWG. NO. 40



MANHOLES IN UNIMPROVED LOCATIONS



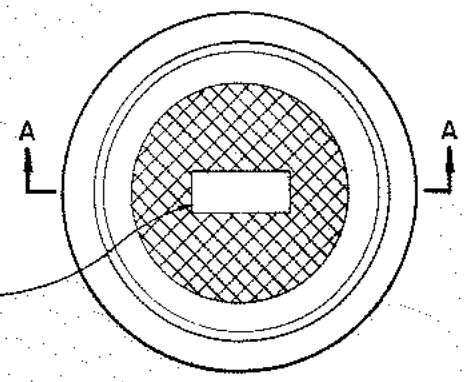
NOTE: ALL CONCRETE SHALL BE CLASS B P.C.C. WITH 1/2 LB. PER CY LAMPBLACK

COVER SETTING DETAIL FOR MANHOLES IN ROADWAYS

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO SS5
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D Rile 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD SEWER SYSTEM DETAILS
	DWG. NO. 41

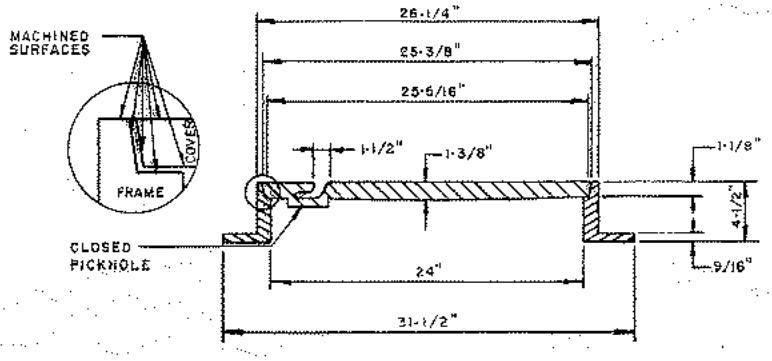
ACCEPTABLE MANUFACTURERS

PHOENIX	P-1090
SBF	1900
D & L	A-1024



APPROPRIATE UTILITY LABEL: SANITARY SEWER OR STORM DRAIN.

PLAN



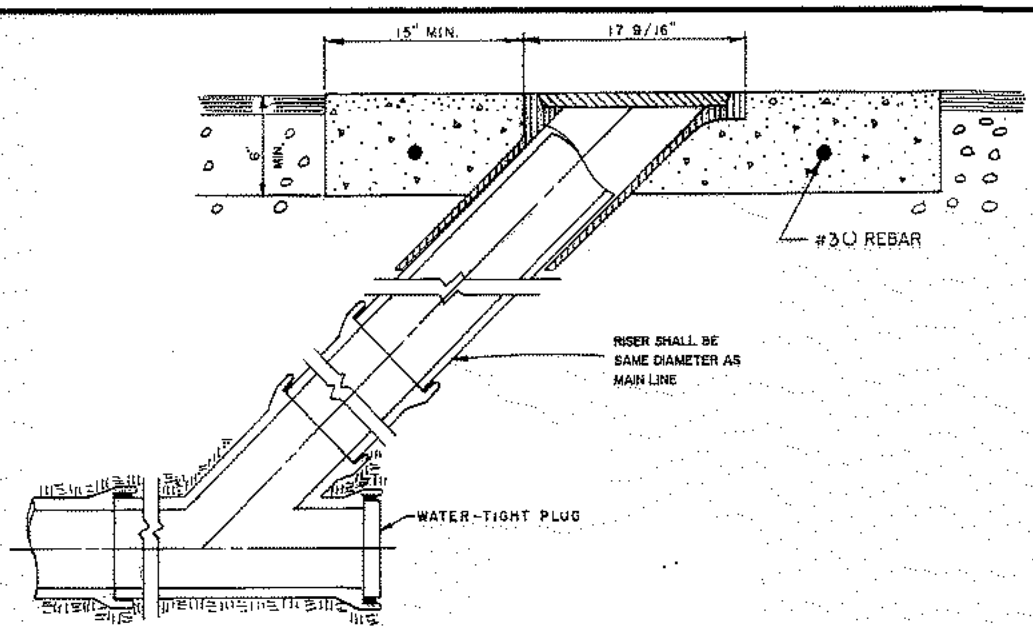
SECTION A

COVER 130 LBS. (MIN.)
FRAME 138 LBS. (MIN.)

NOTES:

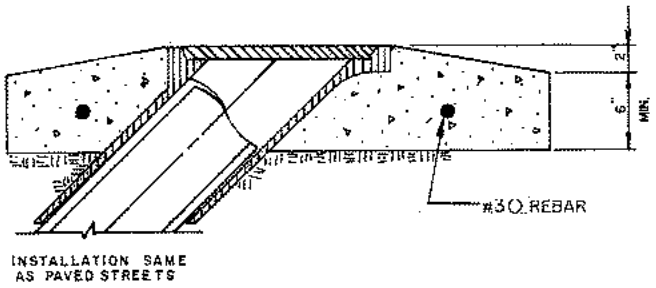
1. FRAME AND COVER FULLY MACHINED ON SURFACES AS SHOWN FOR PERFECT NO-ROCK FIT.
2. STANDARD COVER MARKINGS AVAILABLE: "SANITARY SEWER" OR "STORM DRAIN". CASTING SHALL BE ORDERED WITH APPROPRIATE MARKING.
3. CASTINGS SHALL BE DIPPED IN ASPHALT PAINT.
4. WATERTIGHT COVER AVAILABLE WITH R/G DESIGNATION.
5. ALL PARTS OF ACCEPTABLE COVER ASSEMBLIES ARE INTERCHANGEABLE.
6. MANHOLE COVER SHALL BE SOLID LID WITH BLIND PICKHOLE TYPICAL.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO SS6	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rees 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS 24" MANHOLE FRAME & COVER ASSEMBLY	DWG. NO. 42



PAVED ALLEYS AND SHOULDERS

	6" MAIN	8" MAIN
PHOENIX	P-7004	P-7003
SBF	1249	
D & L	H-6521	H-6530

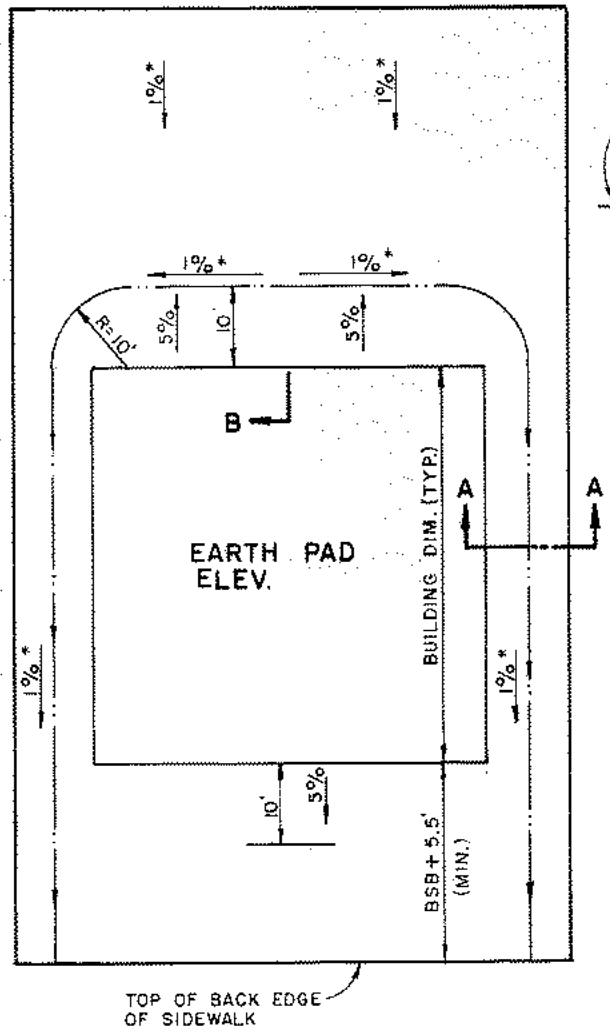


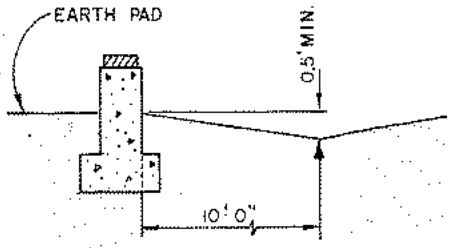
UNPAVED ALLEYS AND SHOULDERS

NOTES:

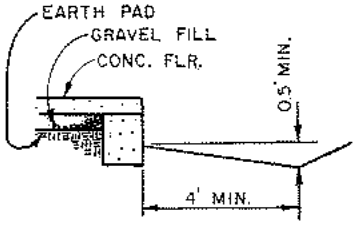
1. ALL WORK TO BE DONE AND ALL MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. EIGHTH (1/8) BEND MAY BE USED IN PLACE OF WYE WITH THE APPROVAL OF THE CITY ENGINEER.
3. ALL CONCRETE SHALL BE CLASS 6 P.C.C.
4. CONCRETE COLLAR AROUND STREET CASTING SHALL BE OVAL IN SHAPE AS IN CASTING.

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO SS7
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS DETAIL OF RODHOLE INSTALLATION.
	DWG. NO. 43





SECTION B



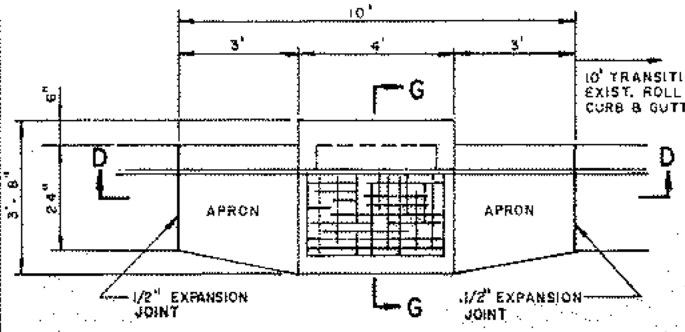
SECTION A-A

NOTE: MINIMUM EARTH PAD ELEVATION = MAXIMUM SWALE ELEVATION +0.5'

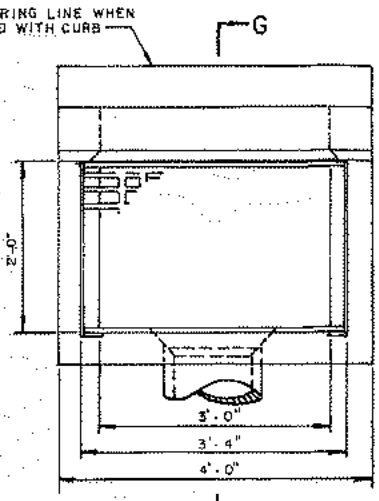
* MINIMUM LOT GRADE MAY BE REDUCED TO NOT LESS THAN 0.5%, PROVIDED:

1. PROPERTY ABUTTING THE SUBDIVISION DRAINS ONTO THE SUBDIVISION PROPERTY, AND A 1% LOT GRADE WOULD OBSTRUCT THE NATURAL DRAINAGE.
2. THE DRAINAGE FROM THE ABUTTING PROPERTY WILL BE COLLECTED AND ROUTED THROUGH THE SUBDIVISION DRAINAGE FACILITIES.
3. THE CITY ENGINEER CONFIRMS THAT LOT GRADES OF NOT LESS THAN 0.5% WILL ACCOMMODATE THE COLLECTION AND ROUTING OF THE SURFACE DRAINAGE.
4. BUILDING PADS SHALL NOT BE INUNDATED DURING A 100 YEAR FREQUENCY DESIGN STORM.

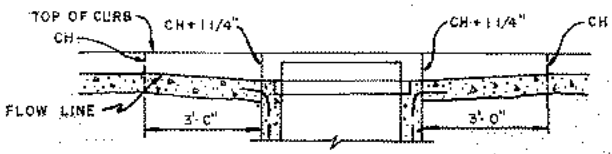
APPROVED BY CITY COUNCIL RESOLUTION NO. 0 (1995 SERIES) DATE: JANUARY 6, 1995	PUBLIC WORKS STANDARD NO. SD-1
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS MINIMUM LOT GRADES
	DWG. NO. 44



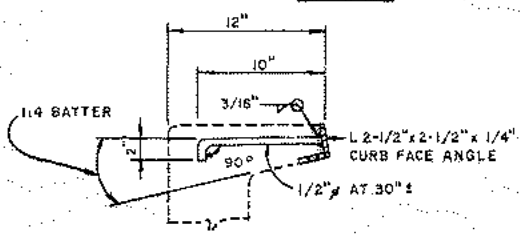
PLAN



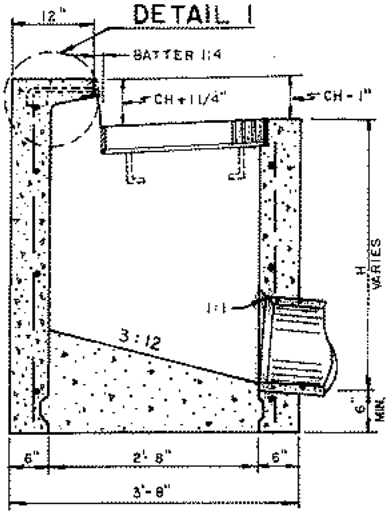
PLAN



SECTION D-D



DETAIL 1

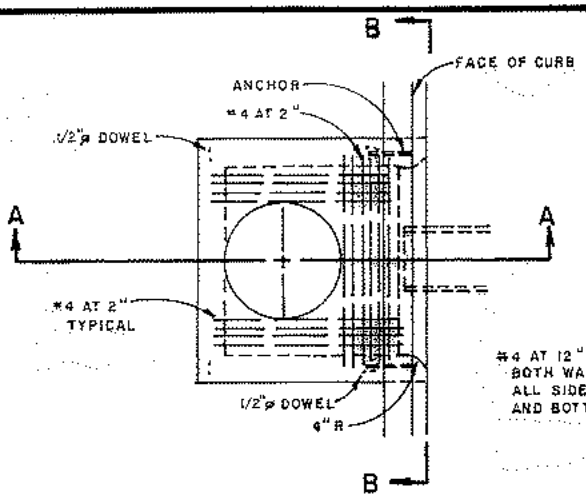


SECTION G-G

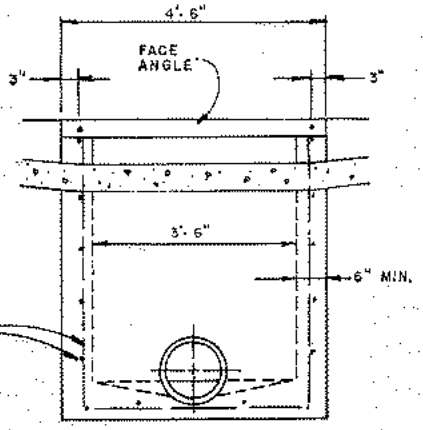
GENERAL NOTES:

1. "H" SHALL NOT EXCEED 8' MAXIMUM.
2. REINFORCING STEEL IN WALLS SHALL BE NO. 4 BARS AT 18"± CENTERS PLACED 1 1/2" CLEAR TO INSIDE OF BOX UNLESS OTHERWISE SHOWN.
3. FRAME AND GRATE SHALL BE CALTRANS TYPE 24-B OR EQUAL, GALVANIZED.
4. PIPE (S) CAN BE PLACED IN ANY WALL.
5. CURB SECTION SHALL MATCH ADJACENT CURB.
6. BASIN FLOORS SHALL HAVE WOOD TROWEL FINISH AND A MINIMUM SLOPE OF 3/12 FROM ALL DIRECTIONS TOWARD OUTLET PIPE.
7. ALL HARDWARE SHALL BE HOT DIPPED GALVANIZED.
8. WHEN INSTALLED IN EXISTING ROLLED CURB & GUTTER WARP TO VERTICAL CURB IN 10' TRANSITION.
9. WHEN APRON IS CONSTRUCTED WITH DROP INLET EXTEND NO. 4 SIDEWALL REBAR 12" INTO TAPERED GUTTER PAN.
10. DELETE APRON IN NON CURB AND GUTTER AREAS.
11. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO SD 2
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS TYPE "GO" DROP INLET
	DWG. NO. 45

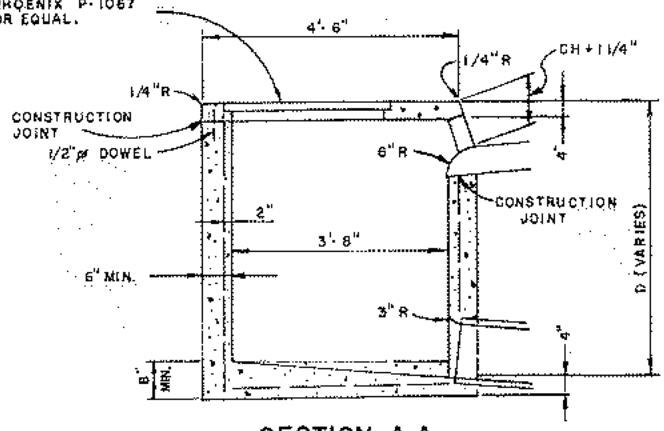


PLAN

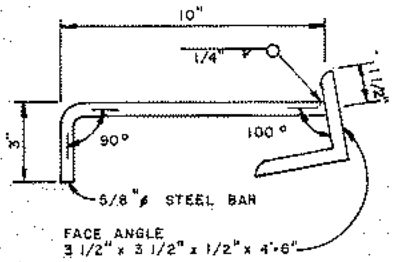


SECTION B-B

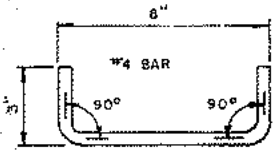
FRAME & COVER SBF 1967 PHOENIX P-1067 OR EQUAL.



SECTION A-A



FACE ANGLE & ANCHOR DETAIL



DOWEL DETAIL

NOTES:

1. CONNECTION PIPES AND OUTLET PIPES MAY BE PLACED IN ANY POSITION AROUND THE WALLS.
2. CURVATURE OF THE LIP AND SIDE WALLS AT GUTTER OPENING SHALL BE FORMED BY CURVED FORMS.
3. CURB FACE HEIGHT OF DROP INLET SHALL BE THAT OF THE EXISTING CURB PLUS 1 1/4".
4. INSTALL 3'-0" LONG TRANSITION SECTION EACH SIDE OF INLET TO DEPRESS THE GUTTER FLOWLINE 1 1/4" AT THE INLET.
5. MINIMUM CLEAR SPACING BETWEEN FACE OF CONCRETE AND REINFORCING STEEL TO BE 1 1/2". MAXIMUM DEPTH "D" SHALL BE 8'-0".
6. FACE ANGLE SHALL BE GALVANIZED AFTER FABRICATION ALL SURFACES SHALL BE FREE OF RUST AND OIL AND NEATLY SOLDERED.
7. WHEN PRECAST CONCRETE BOXES ARE FURNISHED, THE WALL THICKNESS MAY BE 4" WITH REINFORCEMENT AND THE FACE ANGLE MAY BE 3/8" STOCK.
8. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

STEEL LIST FOR TOP	
DESCRIPTION	REQ'D
#4 BAR 4'-4" LONG	7
#4 BAR 3'-11" LONG	8
#4 BAR 1'-7" LONG	3
FACE ANGLE 4'-6"	1
DOWELS	4
FRAME & COVER	1

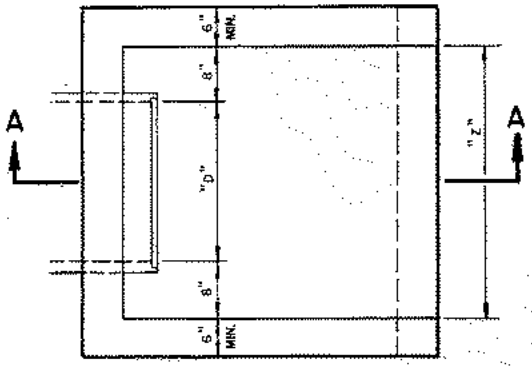
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO SD 3

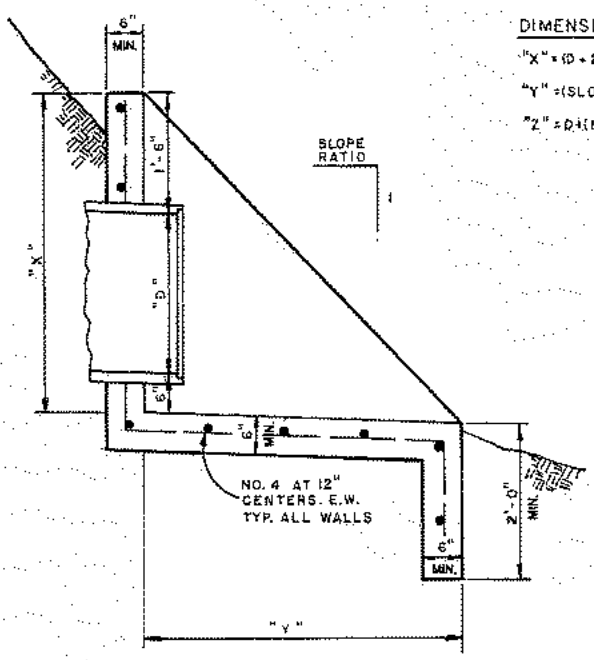
DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rollo 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
DROP INLET
TYPE 2

DWG. NO.
46



PLAN VIEW

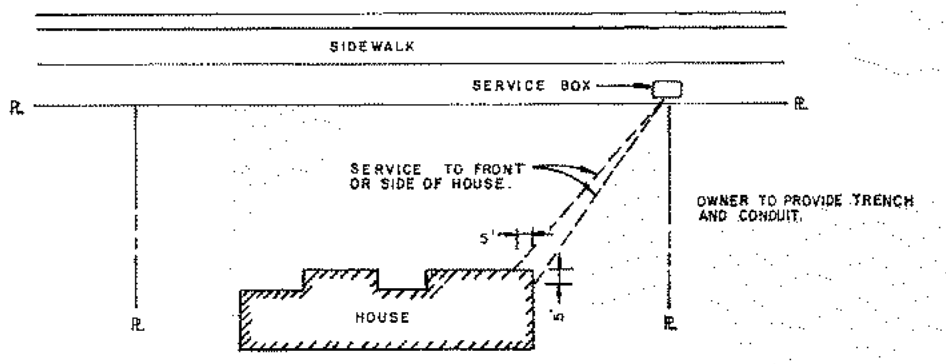


DIMENSIONS:
"X" = (D + 2')
"Y" = (SLOPE RATIO)(D+2')
"Z" = D+(1'+4')

SECTION A-A

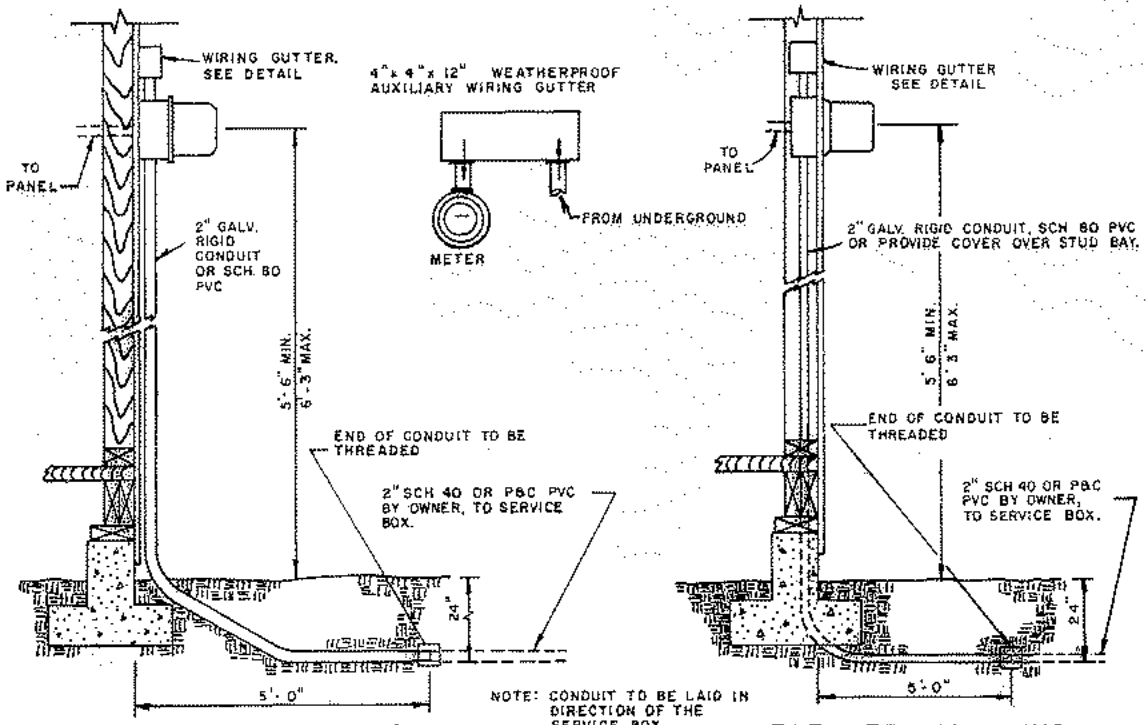
APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO SD 4	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD HEADWALL STRUCTURAL DETAILS	DWG. NO. 47

TYPICAL SERVICE LOCATION



NOTES:

1. CITY OF GRIDLEY WILL INFORM OWNER PRIOR TO START OF CONSTRUCTION WHICH CORNER OF THE BUILDING THE SERVICE WILL BE PROVIDED.
2. CITY OF GRIDLEY TO INSTALL SERVICE TO THE CORNER OF THE BUILDING IN TRENCH AND CONDUIT PROVIDED BY OWNER.
3. BUILDING SWEEP SHALL BE DIRECTED TOWARD SERVICE BOX.
4. ALL CONDUIT INSTALLED BELOW GROUND SHALL BE PLASTIC.



SURFACE MOUNTING

RECESSED MOUNTING

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO E1
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray O. Rollo 18056 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS TYPICAL SERVICE & METER LOCATION
	DWG. NO. 48

SECONDARY OR SERVICE RISER REQUIREMENTS

1-10'-0" GALV. RISER (2" OR 4")
1-30" RADIUS SWEEP (2" OR 4")
6-1/2" x 4" LAG SCREWS
1-GALV. COUPLING (2" OR 4")
1-PVC-GALV. PIPE ADAPTER
25'-SERVICE WIRE COILED ABOVE RISER TIED TO POLE
3-GALV. STRAPS PREFORMED--STRAPS SHALL BE HOT DIP GALVANIZED, 1/4" THICK BY 1 1/4" WIDE, ONE 9/16" DIAMETER HOLE (AFTER GALV.) AT EACH PRESENT END. ATTACHMENT WILL BE BY GALVANIZED 1/2" x 4" LAG SCREWS AT 3'-0" SPACING ON POLE. NO PLUMBER TAPE.

12 KV RISER REQUIREMENTS

SAME AS ABOVE WITH (4" OR 6") AND 36" MIN. RADIUS AS NOTED BELOW.

MINIMUM SWEEP RADII:

SECONDARY CONDUIT = 30"
PRIMARY CONDUIT = 36"

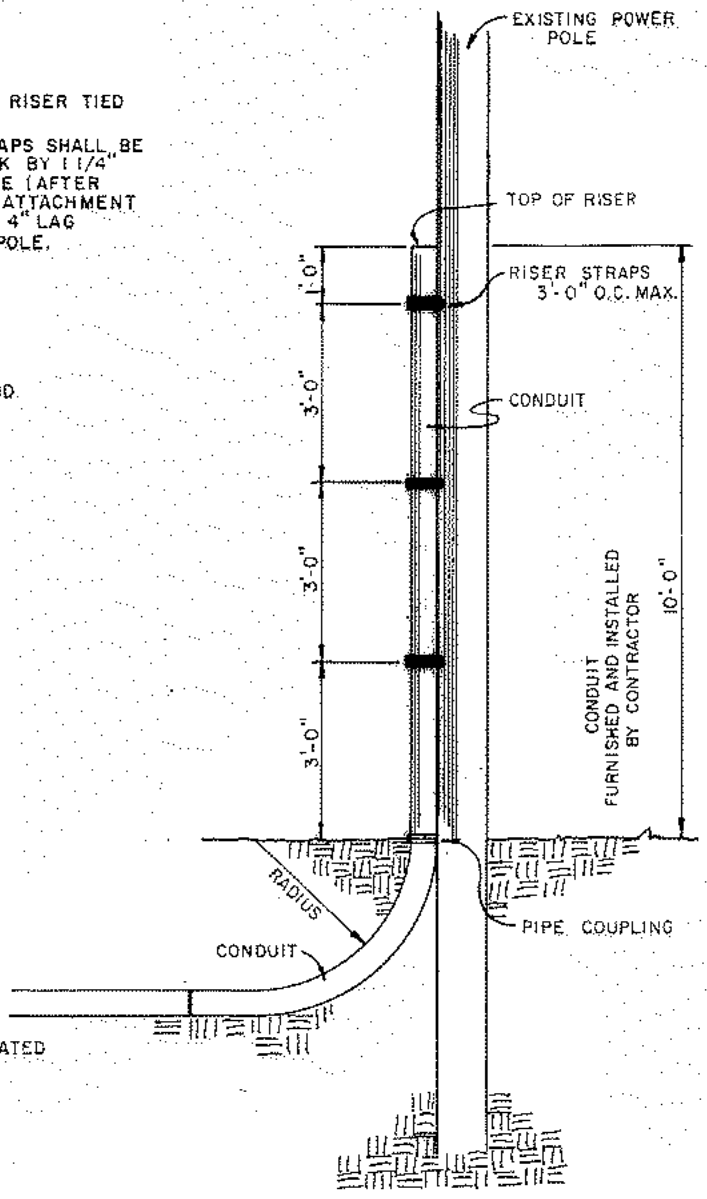
MINIMUM DEPTHS:

SECONDARY CONDUIT DEPTH 24"
PRIMARY CONDUIT DEPTH 30"
NOTE: FOR (2) ADJOINING 90° BENDS RADII = 36" MIN. FOR (3) ADJOINING 90° BENDS, STEEL SWEEPS WITH RADII = 36" MIN. SHALL BE INSTALLED.

CONDUIT SIZE TO BE INDICATED

STRAP SUPPLIES:

ENGFER IRON WORK
KIN-LINE
MAYDWELL HARTZELL
PURCELL MFG. CO.



APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

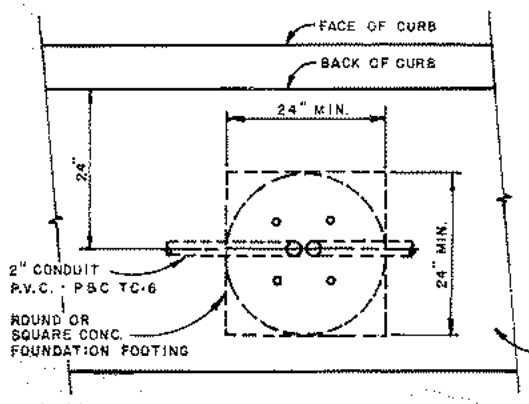
PUBLIC WORKS
STANDARD NO E2

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rollo 18036
CITY ENGINEER RCE NO.

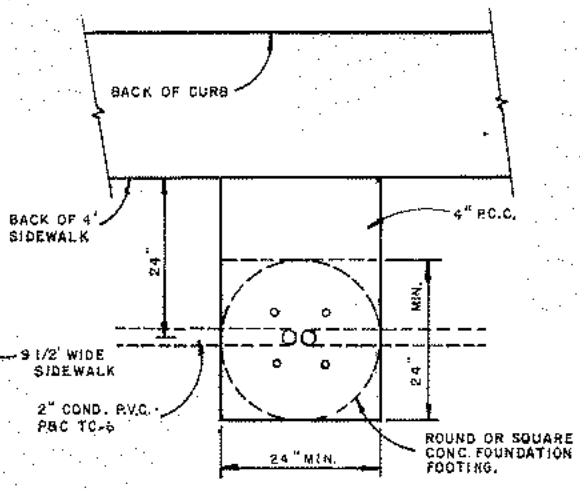
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

POLE RISER DETAIL

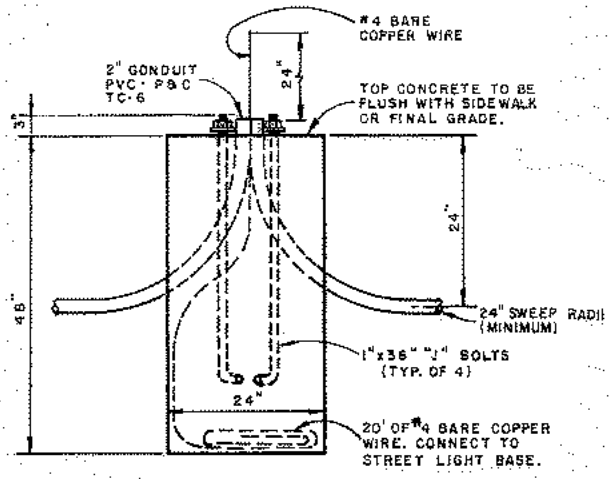
DWG. NO.
49



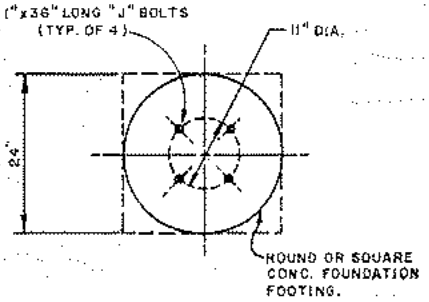
COMMERCIAL



RESIDENTIAL / SUBDIVISION



FOUNDATION

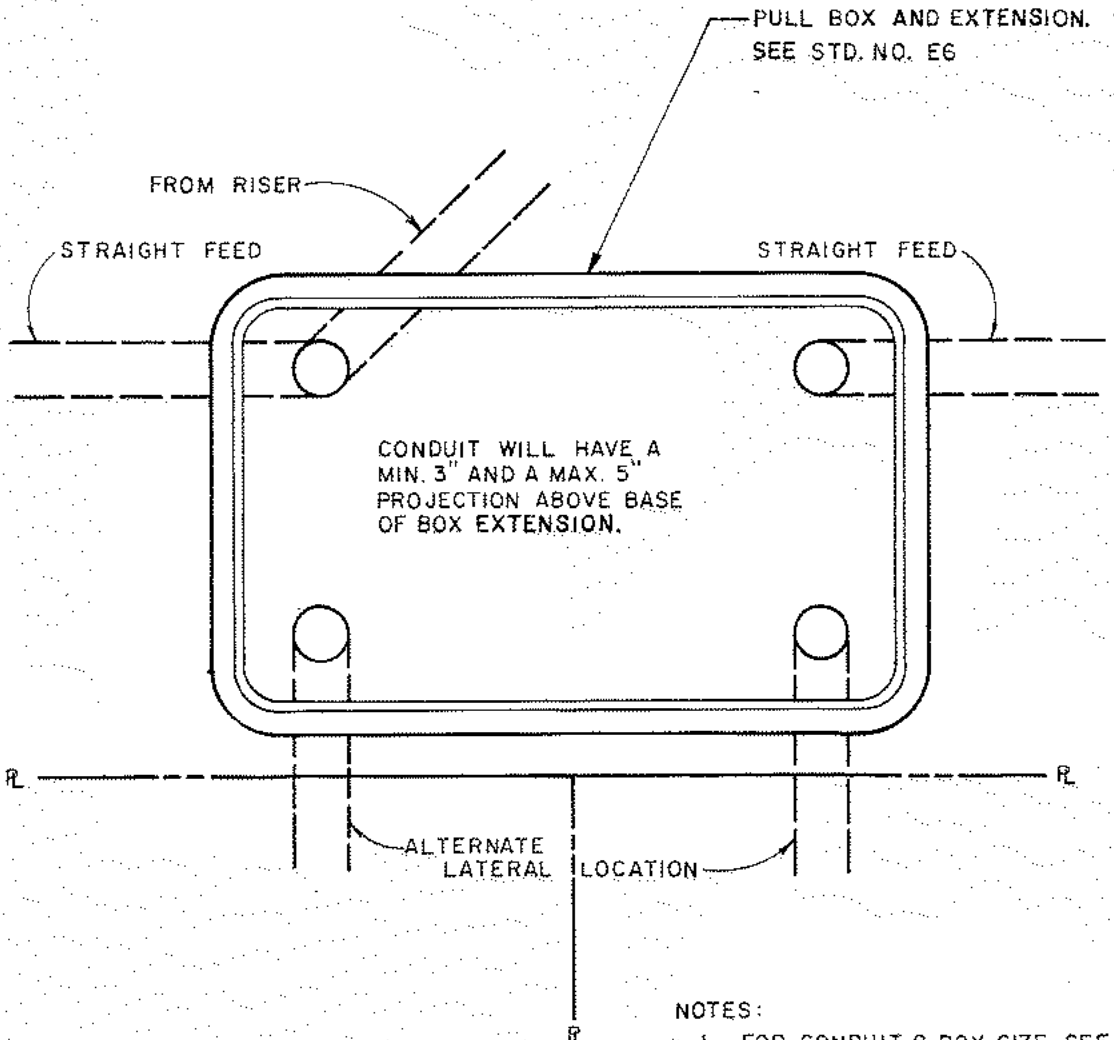


BOLT PATTERN

NOTES:

1. CITY OF GRIDLEY WILL LOCATE ALL STREET LIGHT BASES.
2. OWNER WILL INSTALL CONDUIT AND BASES AS SHOWN.
3. STREET LIGHTS SHALL BE 100 WATT HIGH PRESSURE SODIUM LIGHTS INSTALLED ON 25' TAPERED STEEL POLES WITH 8' ARMS APPROVED BY THE CITY ENGINEER.
4. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

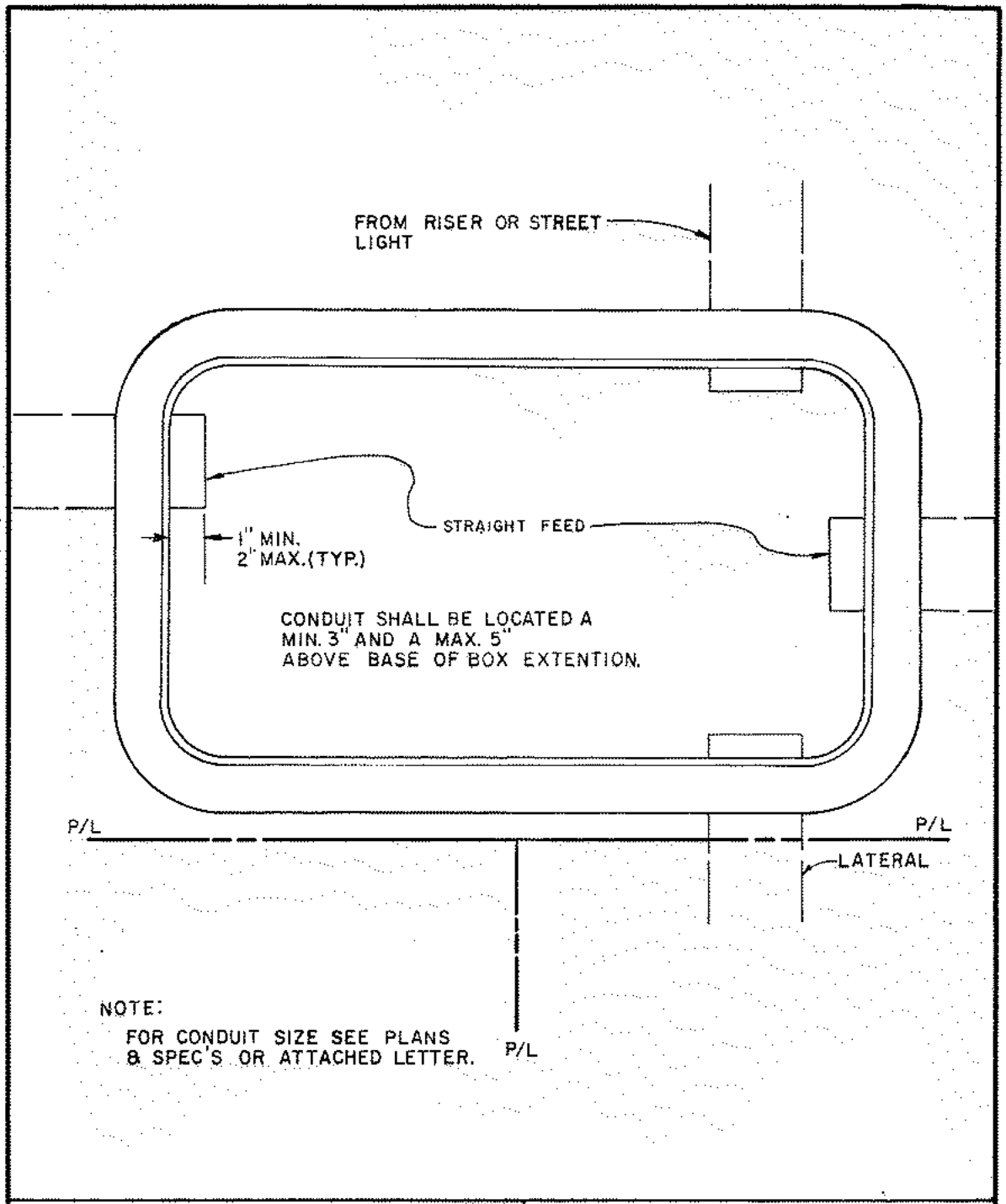
APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO E3
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray O. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS TYPICAL STREET LIGHT STANDARD BASE DETAIL
	DWG. NO. 50



NOTES:

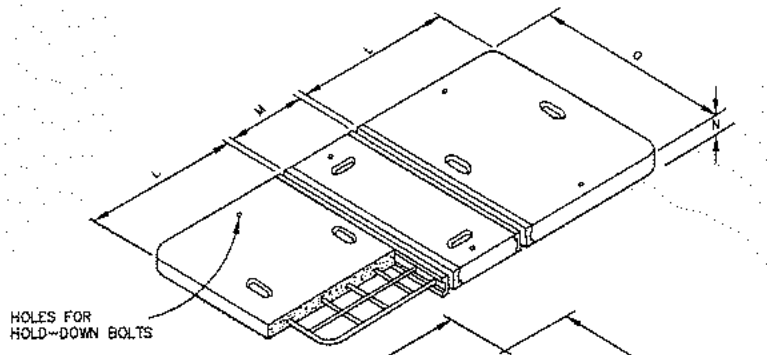
1. FOR CONDUIT & BOX SIZE SEE PLANS & SPECS OR ATTACHED LETTER.
2. THERE SHALL BE A MAXIMUM OF FOUR (4) CONDUITS IN A BOX.
3. MINIMUM SWEEP RADII:
   PRIMARY COND. = 36"
   SECONDAY COND. = 30"

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARO NO E4	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D Rollo 18036 CITY ENGINEER RCE. NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS CONOUIT PLACEMENT PRIMARY BOX	DWG. NO. 51



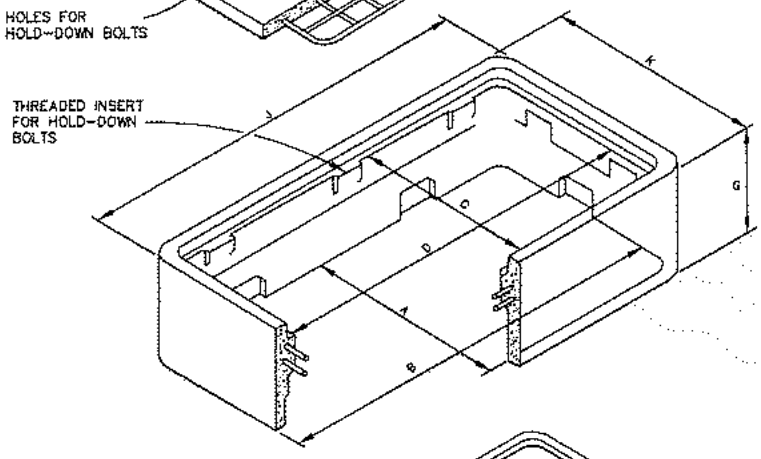
NOTE:
FOR CONDUIT SIZE SEE PLANS & SPEC'S OR ATTACHED LETTER.

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO E5
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS CONDUIT PLACEMENT SECONDARY BOX
	DWG. NO. 52



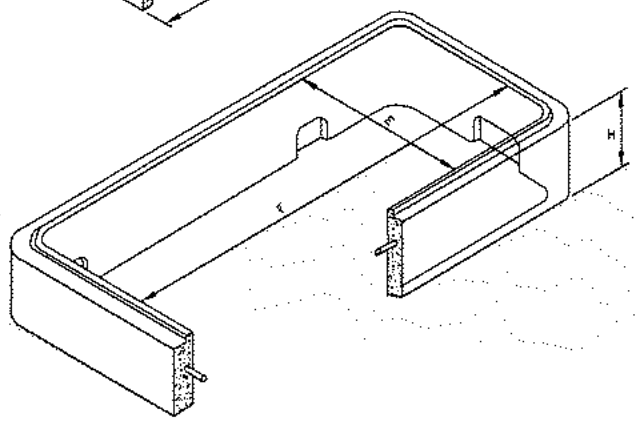
COVER

BOX 2E-(1)PIECE-(1)"L"
BOX 3E-(1)PIECE-(1)"L"
BOX 4E-(2)PIECE-(2)"L"
BOX 5E-(3)PIECE-(2)"L"(1)"M" (SHOWN)



BOX

(5E SHOWN)



EXTENSION

BOX 2E-(1)REQ'D.
BOX 3E-(1)REQ'D.
BOX 4E-(1)REQ'D.
BOX 5E-(1)REQ'D. (SHOWN)

NOTE: 5E BOX, COVER & EXTENSION ARE SHOWN 2E, 3E & 4E ARE SIMILAR

BOX NO.	DIMENSION													
	A	B	C	D	E	F	G	H	J	K	L	M	N	O
2E	17"	30"	17"	30"	——	——	12"	12"	34 3/4"	21 3/4"	30 1/2"	——	2"	17 1/2"
3E	24"	36"	21"	32 1/2"	24"	36"	14"	10"	40"	28 1/2"	35"	——	3"	24"
4E	30"	48"	27"	46"	28"	46"	14"	10"	52"	34"	24"	——	3"	30"
5E	30"	60"	27"	57"	29"	59"	14"	10"	52"	34"	24"	12"	3"	30"

NOTES:

1. ALL LIDS & COVERS SHALL BE FURNISHED WITH HOLD-DOWN BOLTS.
2. STEEL CHECKER PLATE TRAFFIC LIDS SHALL BE SUPPLIED WHERE SPECIFIED.
3. LIDS & COVERS SHALL BE IMPRINTED WITH "HIGH VOLTAGE".
4. BOXES TO BE BROOKS PRODUCTS, CHRISTY, BES, OR EQUIVALENT CONCRETE BOXES

APPROVED BY CITY COUNCIL
RESOLUTION NO. 2004-R-028
DATE: JULY 6, 2004

PUBLIC WORKS
STANDARD NO. E6

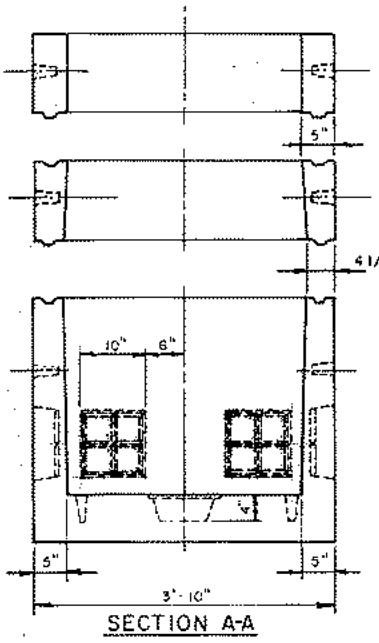
DES: P.W.R. DRWN: P.W.R.
CHK: H.L.V. DATE: JUNE, 2004
APPROVED:

Brian A. Nash 33381
CITY ENGINEER RCE NO.

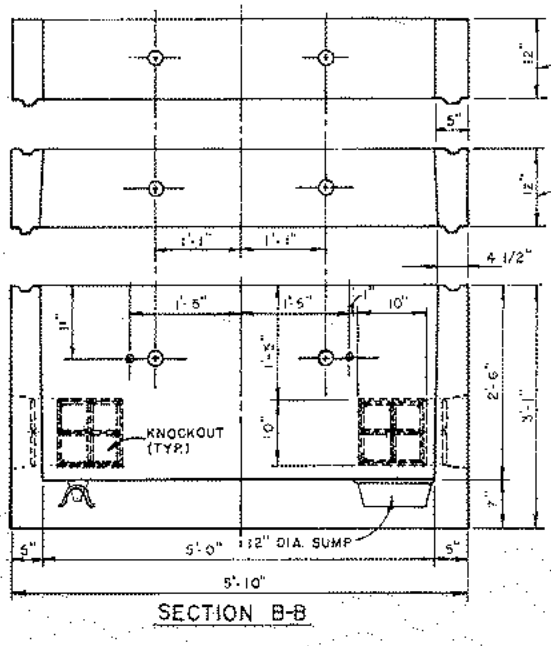
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

ELECTRIC
PULL BOXES

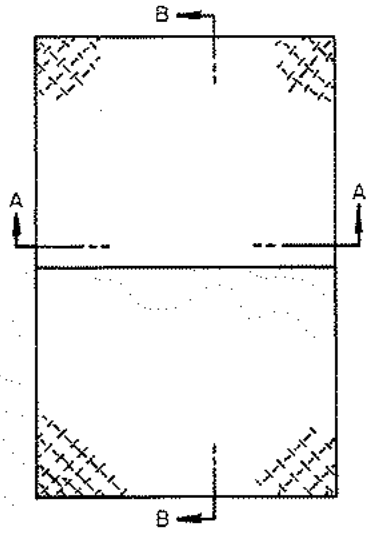
DWG. NO.
53



SECTION A-A



SECTION B-B



PLAN

GENERAL NOTES:

THIS VAULT IS FOR USE IN ALL NON PAVED AREAS SUBJECT TO PEDESTRIAN TRAFFIC WITH A RATING OF 300 LBS. PER SQ. FT. AND/OR LIGHT VEHICULAR TRAFFIC ONLY. DESIGN IS BASED ON A 5,000 LB. SINGLE WHEEL LOAD OVER ANY 10"x10" AREA. STRUCTURES MUST BE ABLE TO WITHSTAND FORCES DUE TO AN ADDITIONAL INWARD LOAD OF 20,000 LBS. (WORKING LOAD) WITH A SAFETY FACTOR OF 2, ACTING PERPENDICULAR TO THE SURFACE. STRUCTURES SHALL BE DESIGNED TO PROVIDE A DRY, WATERTIGHT INSTALLATION. BLIND GROUND HOLES SHALL BE PROVIDED IN EACH CORNER, 6" AWAY FROM ADJACENT SIDE WALLS

CONTRACTOR NOTES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL NECESSARY LABOR, EQUIPMENT, TOOLS, AND MATERIALS TO COMPLETE THE VAULT INSTALLATION TO THE SPECIFIED LINES AND GRADES, INCLUDING SHEETING, SHORING, SAFETY EQUIPMENT, AND TRAFFIC CONTROL DEVICES. THE COMPLETE VAULT SHALL BE WATERTIGHT.

INSTALLATION:

EXCAVATION AND BEDDING: THE EXCAVATION MUST ALLOW FOR OVERALL ASSEMBLED HEIGHT OF VAULT PLUS THE HEIGHT OF RISERS, MANHOLE CASTINGS, ETC., AND 3" TO 6" OF COMPACTED SAND OR GRAVEL BEDDING MATERIAL, GRADED LEVEL. A MINIMUM CLEARANCE OF 6" AROUND THE SIDE WALLS OF THE VAULT IS REQUIRED FOR EASE OF INSTALLATION.

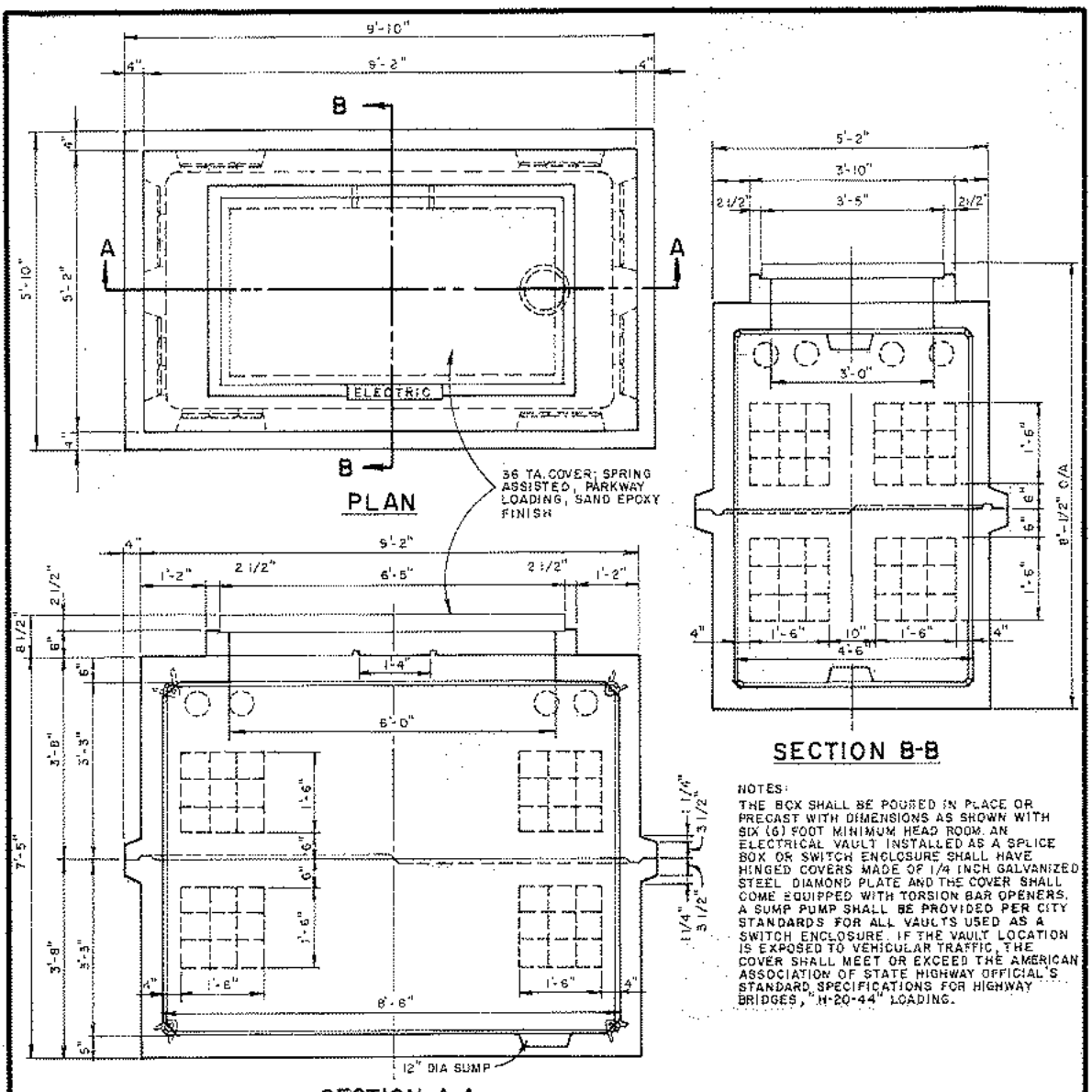
SETTING: THE VAULT IS ASSEMBLED BY LOWERING EACH SECTION INTO THE EXCAVATION. THE BASE SECTION IS LOWERED FIRST, SET LEVEL AND FIRMLY POSITIONED BEFORE PLACING INTERMEDIATE AND TOP SECTIONS. CARE SHALL BE TAKEN THAT THE SEAL SURFACES BETWEEN SECTIONS ARE CLEAN AND THAT THE GASKETS ARE IN PLACE.

BACKFILLING: BACKFILL AROUND ALL VAULTS SHOULD CONSIST OF GRAVEL OR SAND, SO THAT NO VOIDS REMAIN BETWEEN THE VAULT WALLS AND NATIVE SOIL. BACKFILLING SHOULD NOT BE DONE UNTIL THE VAULT IS COMPLETELY ASSEMBLED, MAKING CERTAIN TO COMPACT THE BACKFILL PROGRESSIVELY FROM THE BOTTOM TO THE SURFACE. ALL BACKFILLING IS THE RESPONSIBILITY OF THE CUSTOMER AND/OR CONTRACTOR.

GROUTING: ALL GROUTING OF RISERS, COVERS, CONDUIT, OR SPECIFIC SECTIONS OF VAULTS IS THE RESPONSIBILITY OF THE CUSTOMER AND/OR CONTRACTOR.

WHEN SETTING CONCRETE BOXES IN PLACE, USE SPACERS TO ADJUST THE BOX TO GRADE. GROUT BETWEEN BODY AND TOP SECTION AND AROUND DUCT ENTRANCES AS REQUIRED. IT IS DESIRABLE THAT ALL DUCTS ENTERING THE BOX DO SO THROUGH THE KNOCKOUTS. THE MAIN WALL OF THE VAULT SHOULD NOT BE BROKEN OUT TO PROVIDE ACCESS FOR DUCTS OR CONDUITS. DUCTS AND CONDUITS SHOULD NOT EXTEND MORE THAN TWO INCHES INTO THE BOX. WHERE PRECAST BOXES MUST BE LOCATED IN DRIVEWAYS OR OTHER AREAS SUBJECT TO LIGHT TRAFFIC, USE A TRAFFIC COVER AND RECESS BOX TO MAKE COVER FLUSH WITH SIDEWALK. USE BOLT DOWN COVERS ON ALL PRIMARY CABLE BOXES.

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO E7
DES: _____ DWN: _____ CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS 3'x5' ELECTRICAL VAULT
	DWG. NO. 54



NOTES:
THE BOX SHALL BE POURED IN PLACE OR PRECAST WITH DIMENSIONS AS SHOWN WITH SIX (6) FOOT MINIMUM HEAD ROOM. AN ELECTRICAL VAULT INSTALLED AS A SPLICE BOX OR SWITCH ENCLOSURE SHALL HAVE HINGED COVERS MADE OF 1/4 INCH GALVANIZED STEEL DIAMOND PLATE AND THE COVER SHALL COME EQUIPPED WITH TORSION BAR OPENERS. A SUMP PUMP SHALL BE PROVIDED PER CITY STANDARDS FOR ALL VAULTS USED AS A SWITCH ENCLOSURE. IF THE VAULT LOCATION IS EXPOSED TO VEHICULAR TRAFFIC, THE COVER SHALL MEET OR EXCEED THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL'S STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, "H-20-44" LOADING.

NOTES:

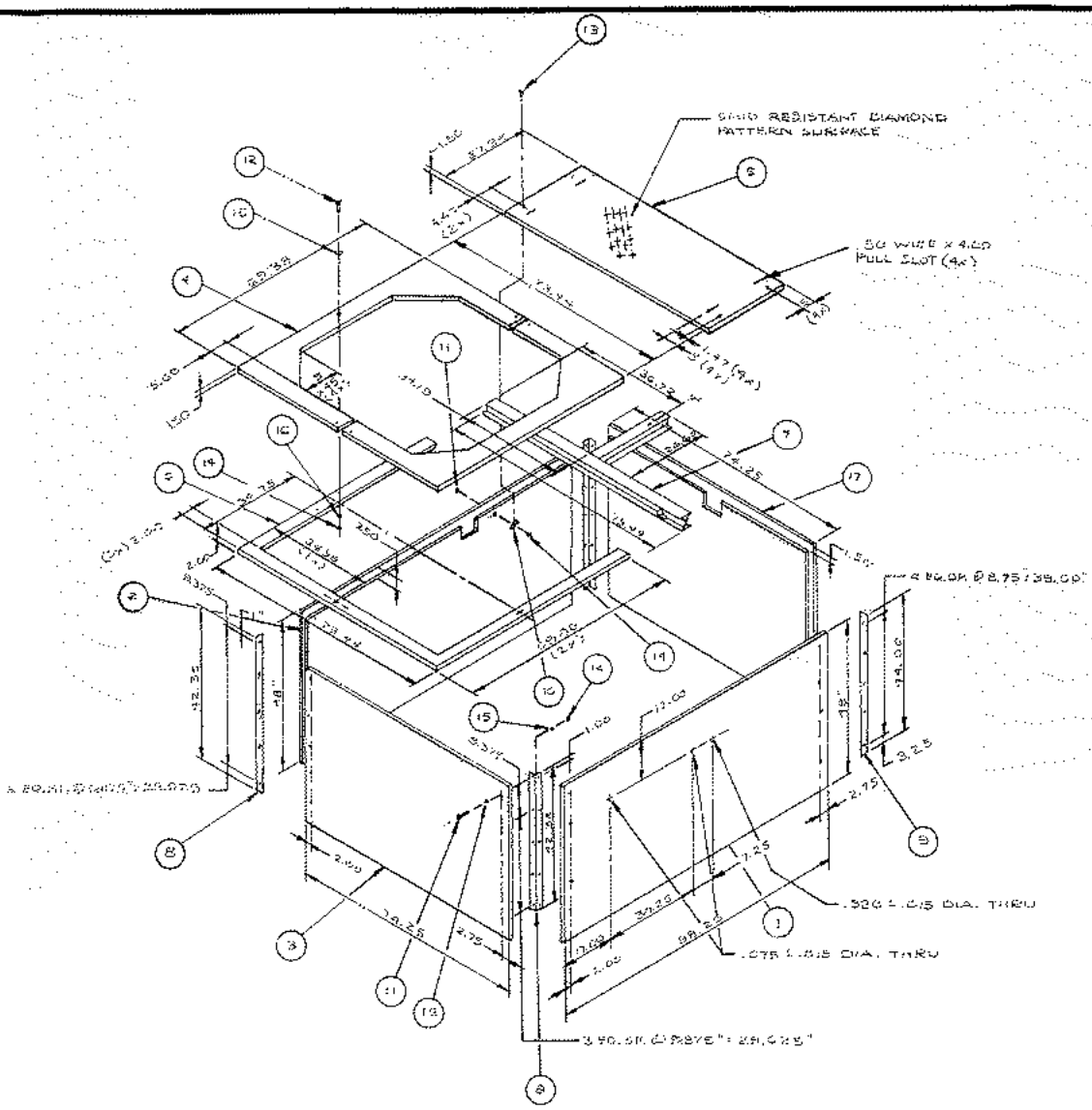
EXCAVATION AND BEDDING: THE EXCAVATION MUST ALLOW FOR OVERALL ASSEMBLED HEIGHT OF VAULT PLUS ADDED HEIGHT OF RISERS, MANHOLE, CASTINGS, ETC., AND BEDDING MATERIAL CONSISTING OF THREE (3) INCHES TO SIX (6) INCHES OF COMPACTED SAND OR GRAVEL, GRADED LEVEL. A MINIMUM CLEARANCE OF SIX (6) INCHES AROUND THE SIDEWALLS OF THE VAULT IS REQUIRED FOR EASE OF INSTALLATION.

SETTING: THE VAULT IS ASSEMBLED BY LOWERING EACH SECTION INTO THE EXCAVATION. THE BASE SECTION IS LOWERED FIRST, SET LEVEL, AND FIRMLY POSITIONED BEFORE PLACING INTERMEDIATE AND TOP SECTIONS. CARE SHOULD BE TAKEN TO INSURE THAT THE SEAL SURFACES BETWEEN SECTIONS ARE CLEAN AND THAT THE GASKETS ARE IN PLACE.

BACKFILLING: BACKFILL MATERIAL AROUND VAULTS SHALL BE GRAVEL OR SAND SO THAT NO VOIDS REMAIN BETWEEN THE VAULT WALLS AND NATIVE SOIL. BACKFILLING SHALL NOT BE DONE UNTIL THE VAULT IS COMPLETELY ASSEMBLED, MAKING CERTAIN TO COMPACT THE BACKFILL PROGRESSIVELY FROM THE BOTTOM TO THE TOP SURFACE. ALL BACKFILLING IS THE RESPONSIBILITY OF THE CUSTOMER AND/OR CONTRACTOR.

GROUTING: GROUTING OF RISERS, COVERS, CONDUIT OR SPECIFIC SECTIONS OF VAULTS IS THE RESPONSIBILITY OF THE CUSTOMER AND/OR CONTRACTOR.

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO E8
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS 4 1/2' x 8 1/2' ELECTRICAL VAULT
	DWG. NO. 55



QTY	PART NO.	DESCRIPTION	WT	ITEM	QTY	PART NO	DESCRIPTION	WT	ITEM
2	U428	CORNER ANGLE 2"x2"x1/8" GALV. STL.	7	9					
2	U455	CORNER ANGLE 2"x2"x1/8" GALV. STL.	65	8	1	PM 1419 HR	END PANEL (MADE FROM MOLD GSK-375)		17 *
1	U412	I-BEAM SUPPORT 4"H x 7.7# GALV. STL.	65	7	6	12041	5/8" LOCKWASHER GALV. STL.		16
1	U413	RECTANGULAR TUBE SUPPORT, GALV. STL.	94	6	86	12039	3/8" FLATWASHER GALV. STL.		15
1	PM 1419 C	COVER (MADE FROM MOLD GSK-374)	308	5	46	12065	3/8"-16 HEX. NUTS GALV. STL.		14
1	PM 1419 F	FRAME	152	4	4	U391	3/8"-16x2" LG. PENTA HD. BOLT, ST. STL.		13
1	PM 1419 HL	END PANEL (MADE FROM MOLD GSK-373)	145	3	6	12042	3/8"-16x3 1/2" LG HEX HD. BOLT, GALV. STL.		12
1	PM 1419 GL	SIDE PANEL (" " " GSK-372)	177	2	40	12013	3/8"-16x2 1/2" LG. HEX. HD. BOLT, GALV. STL.		11
1	PM 1419 GR	SIDE PANEL (" " " GSK-371)	177	1	4	U435	COVER LOCK DOWN BRACKET, GALV. STL.	.2	10

* NOTE: PART IS MADE OF COMPOSOLITE R.P.M.

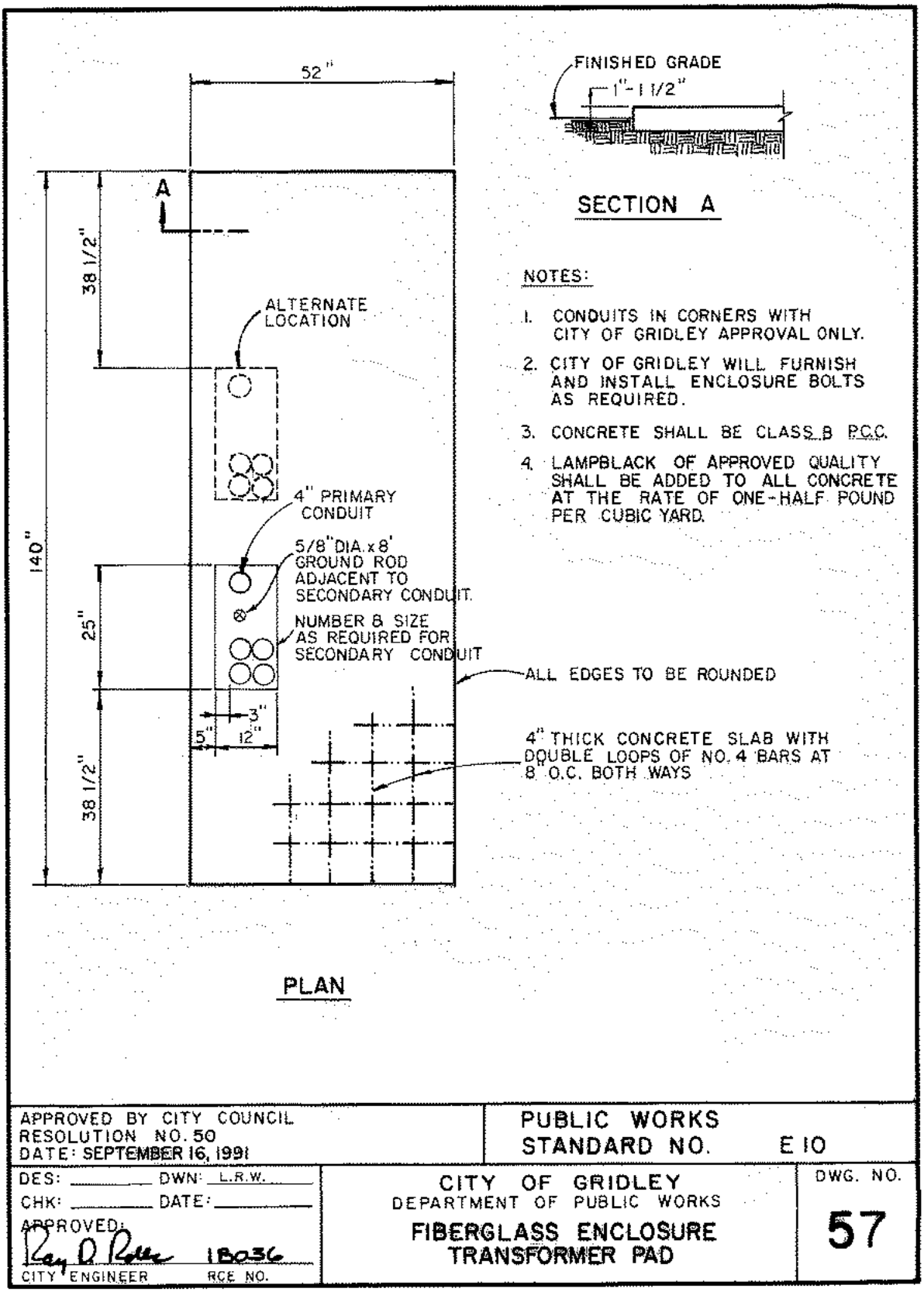
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

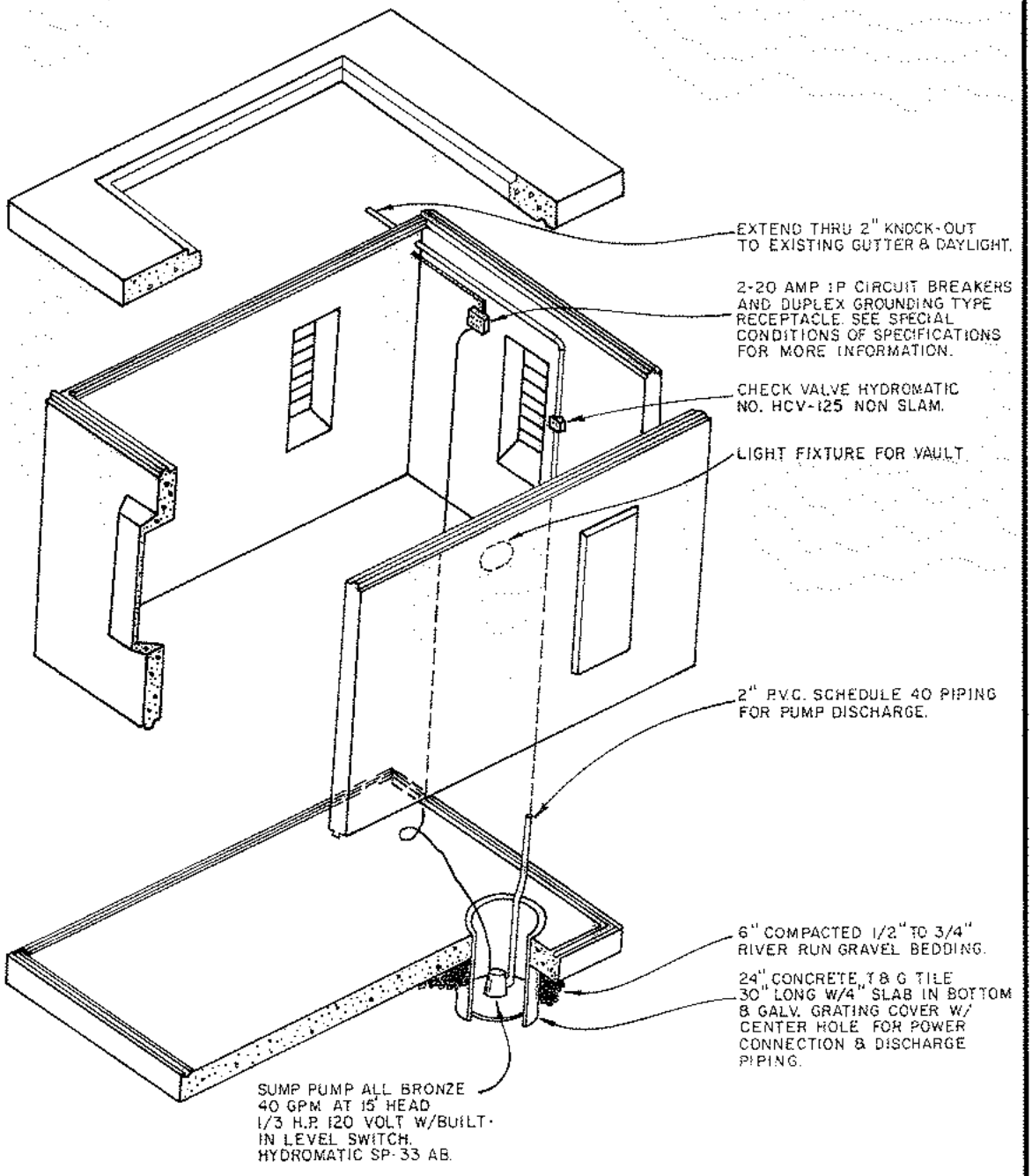
PUBLIC WORKS
STANDARD NO. E9

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED: Ray D Rolle 18036
CITY ENGINEER RCE NO.

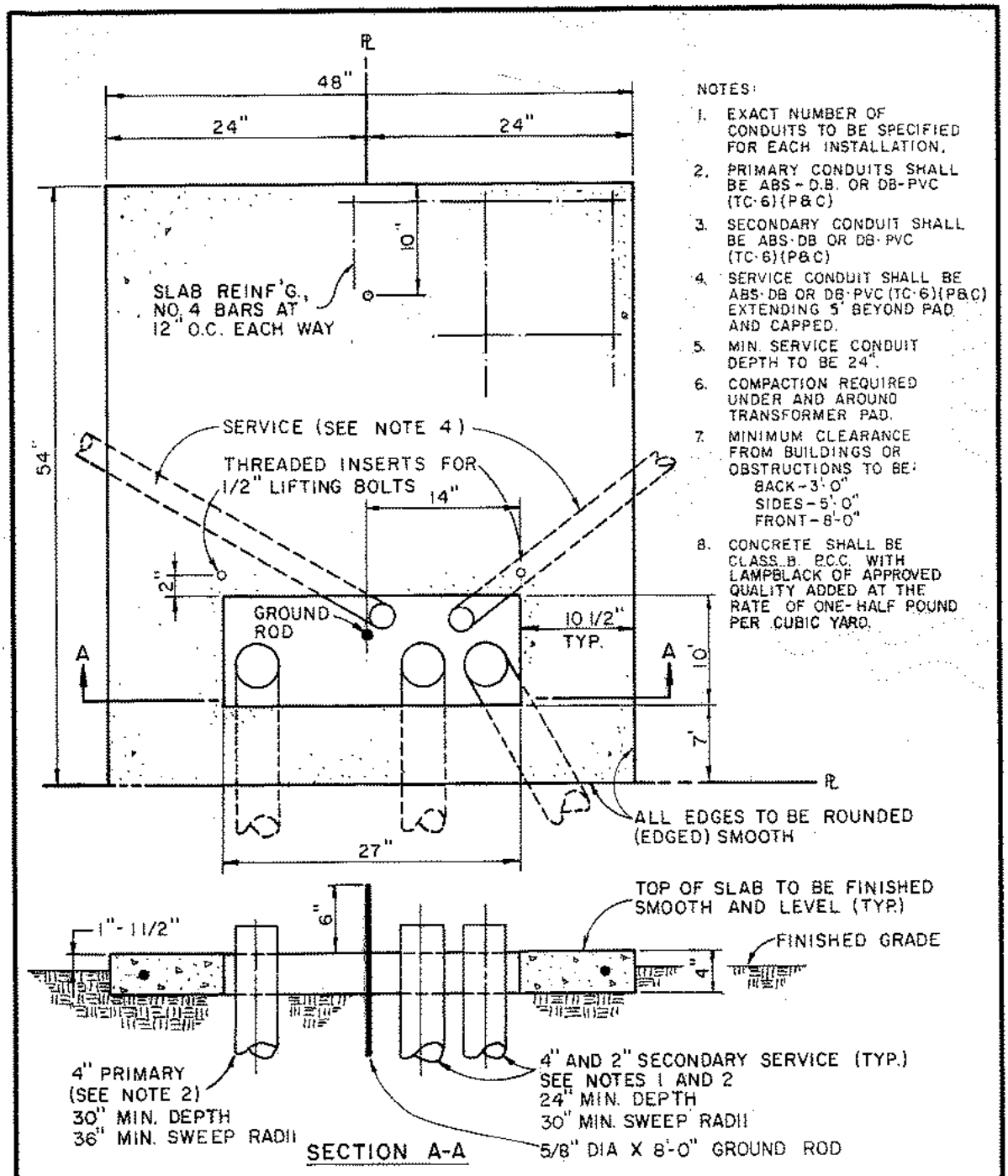
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
CARLON SWITCH VAULT
6'x 8'x 4' DEEP

DWG. NO.
56


52"
A
38 1/2"
140"
25"
38 1/2"
ALTERNATE LOCATION
4" PRIMARY CONDUIT
5/8" DIA. x 8' GROUND ROD ADJACENT TO SECONDARY CONDUIT.
NUMBER 8 SIZE AS REQUIRED FOR SECONDARY CONDUIT
ALL EDGES TO BE ROUNDED
3"
5"
12"
4" THICK CONCRETE SLAB WITH DOUBLE LOOPS OF NO. 4 BARS AT 8" O.C. BOTH WAYS
FINISHED GRADE
1" - 1 1/2"
SECTION A
NOTES:
1. CONDUITS IN CORNERS WITH CITY OF GRIDLEY APPROVAL ONLY.
2. CITY OF GRIDLEY WILL FURNISH AND INSTALL ENCLOSURE BOLTS AS REQUIRED.
3. CONCRETE SHALL BE CLASS B P.C.C.
4. LAMPBLACK OF APPROVED QUALITY SHALL BE ADDED TO ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
PLAN
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991
PUBLIC WORKS
STANDARD NO. E 10
DES: ____ DWN: L.R.W.
CHK: ____ DATE: ____
APPROVED:
CITY ENGINEER
RCE NO. 18036
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
FIBERGLASS ENCLOSURE
TRANSFORMER PAD
DWG. NO.
57



APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO. E-11
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS SUMP PUMP DETAILS
	DWG. NO. 58



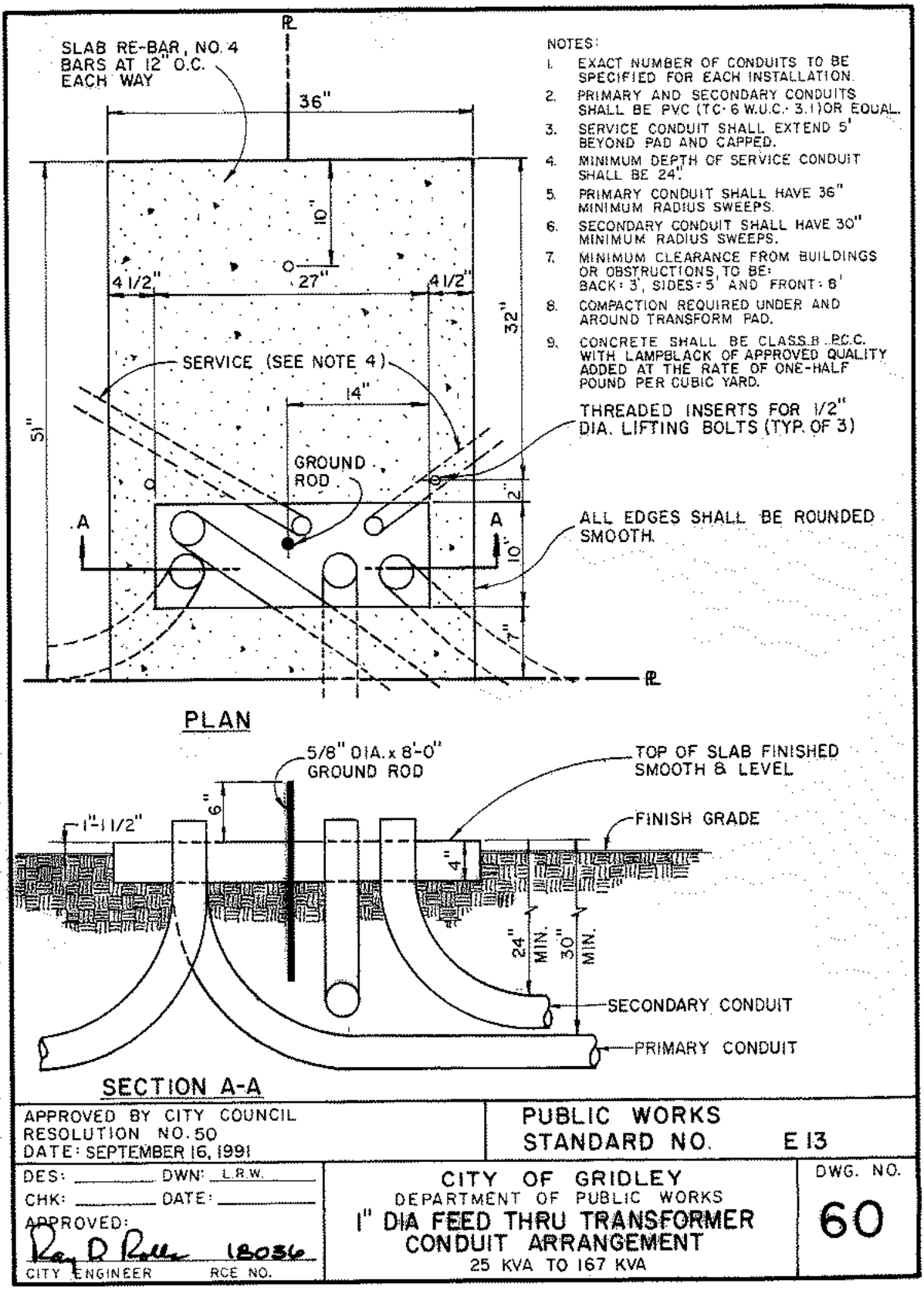
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO. E 12

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rollo 18036
CITY ENGINEER RCE NO.

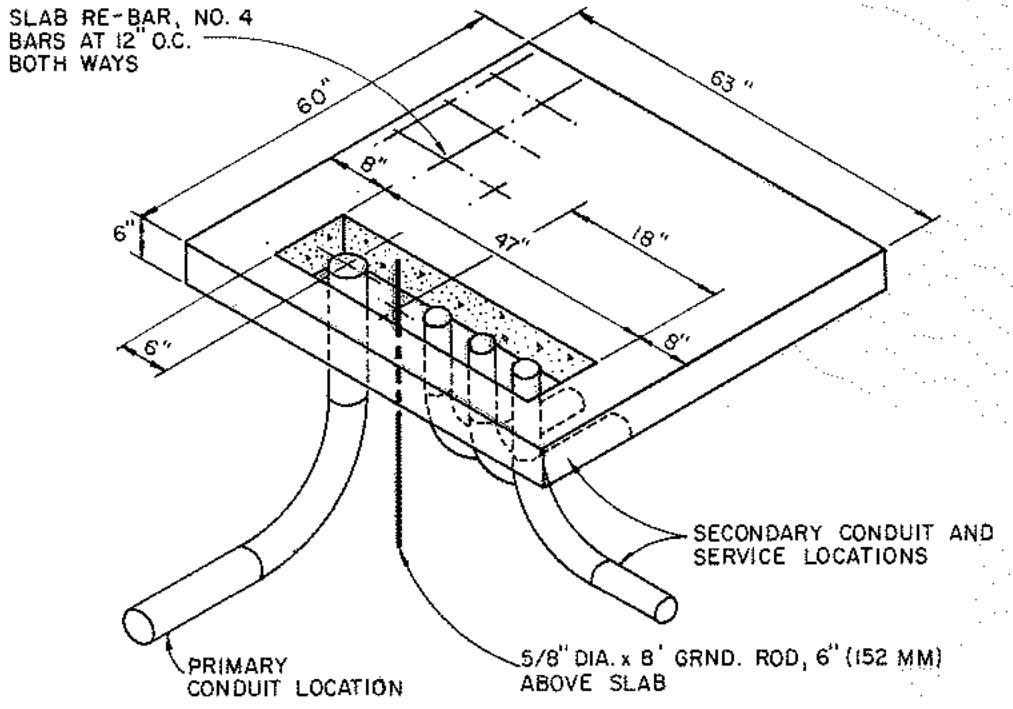
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
SINGLE PHASE
TRANSFORMER PAD DETAILS
25 K.V.A. TO 167 K.V.A.

DWG. NO.
59


SLAB RE-BAR, NO. 4 BARS AT 12" O.C. EACH WAY
36"
10"
27"
4 1/2"
4 1/2"
32"
51"
SERVICE (SEE NOTE 4)
14"
GROUND ROD
THREADED INSERTS FOR 1/2" DIA. LIFTING BOLTS (TYP. OF 3)
2"
ALL EDGES SHALL BE ROUNDED SMOOTH.
10"
7"
A
A
NOTES:
1. EXACT NUMBER OF CONDUITS TO BE SPECIFIED FOR EACH INSTALLATION.
2. PRIMARY AND SECONDARY CONDUITS SHALL BE PVC (TC-6 W.U.C.-3.1) OR EQUAL.
3. SERVICE CONDUIT SHALL EXTEND 5' BEYOND PAD AND CAPPED.
4. MINIMUM DEPTH OF SERVICE CONDUIT SHALL BE 24".
5. PRIMARY CONDUIT SHALL HAVE 36" MINIMUM RADIUS SWEEPS.
6. SECONDARY CONDUIT SHALL HAVE 30" MINIMUM RADIUS SWEEPS.
7. MINIMUM CLEARANCE FROM BUILDINGS OR OBSTRUCTIONS TO BE: BACK: 3', SIDES: 5' AND FRONT: 8'
8. COMPACTION REQUIRED UNDER AND AROUND TRANSFORM PAD.
9. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
PLAN
5/8" DIA. x 8'-0" GROUND ROD
TOP OF SLAB FINISHED SMOOTH & LEVEL
1"-1 1/2"
6"
FINISH GRADE
4"
24" MIN.
30" MIN.
SECONDARY CONDUIT
PRIMARY CONDUIT
SECTION A-A
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991
PUBLIC WORKS
STANDARD NO. E 13
DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D Rollo 18036
CITY ENGINEER RCE NO.
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
1" DIA FEED THRU TRANSFORMER CONDUIT ARRANGEMENT
25 KVA TO 167 KVA
DWG. NO.
60

NOTES:

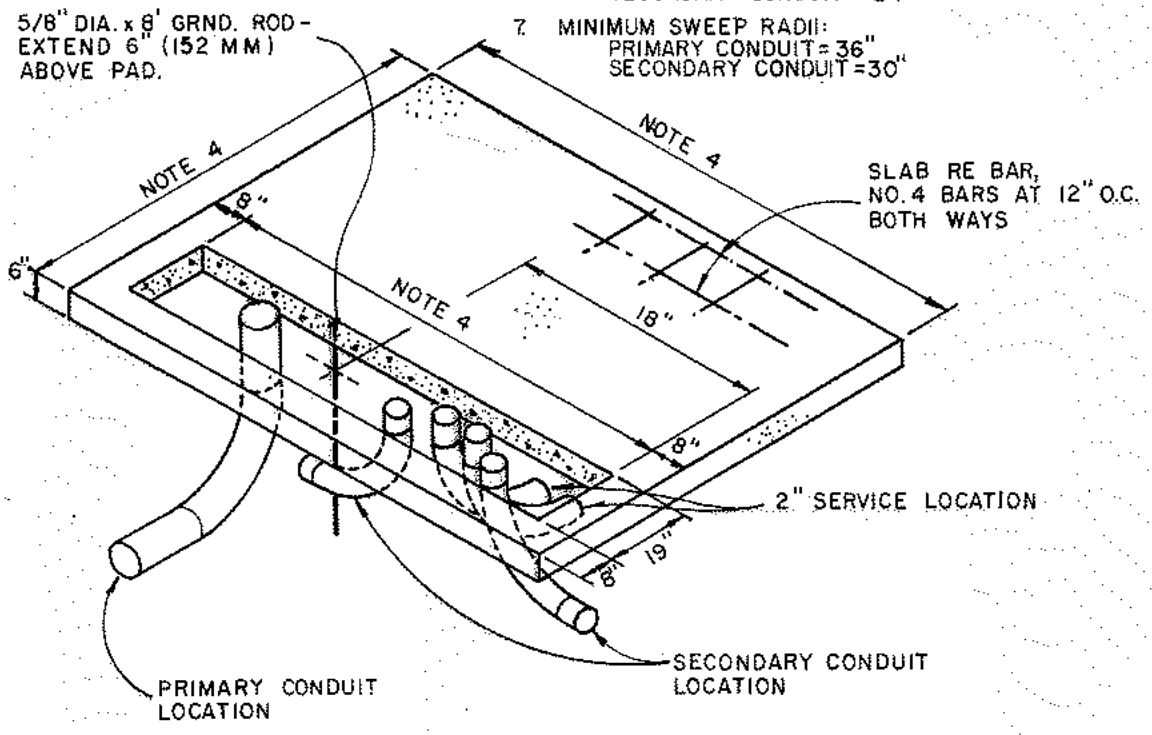
1. PRIOR TO POURING PAD HAVE ELECTRIC DEPARTMENT INSPECT CONDUIT LOCATION.
2. SECONDARY CONDUITS SHALL BE INSTALLED ON EXTREME RIGHT SIDE OF PAD OPENING.
3. MIN. CLEARANCE FROM BUILDINGS OR OTHER OBSTRUCTIONS TO BE: BACK = 3', SIDES = 5', FRONT = 8'.
4. COMPACTION REQUIRED UNDER AND AROUND PAD.
5. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
6. MINIMUM DEPTHS:
   PRIMARY CONDUIT = 30"
   SECONDARY CONDUIT = 24"
7. MINIMUM SWEEP RADII:
   PRIMARY CONDUIT = 36"
   SECONDARY CONDUIT = 30"
8. CONDUIT SHALL BE PVC TC-6 (P&C)



APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO. E 14
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS TRANSFORMER PAD 45 KVA TO 500 KVA (3 PHASE)
	DWG. NO. 61

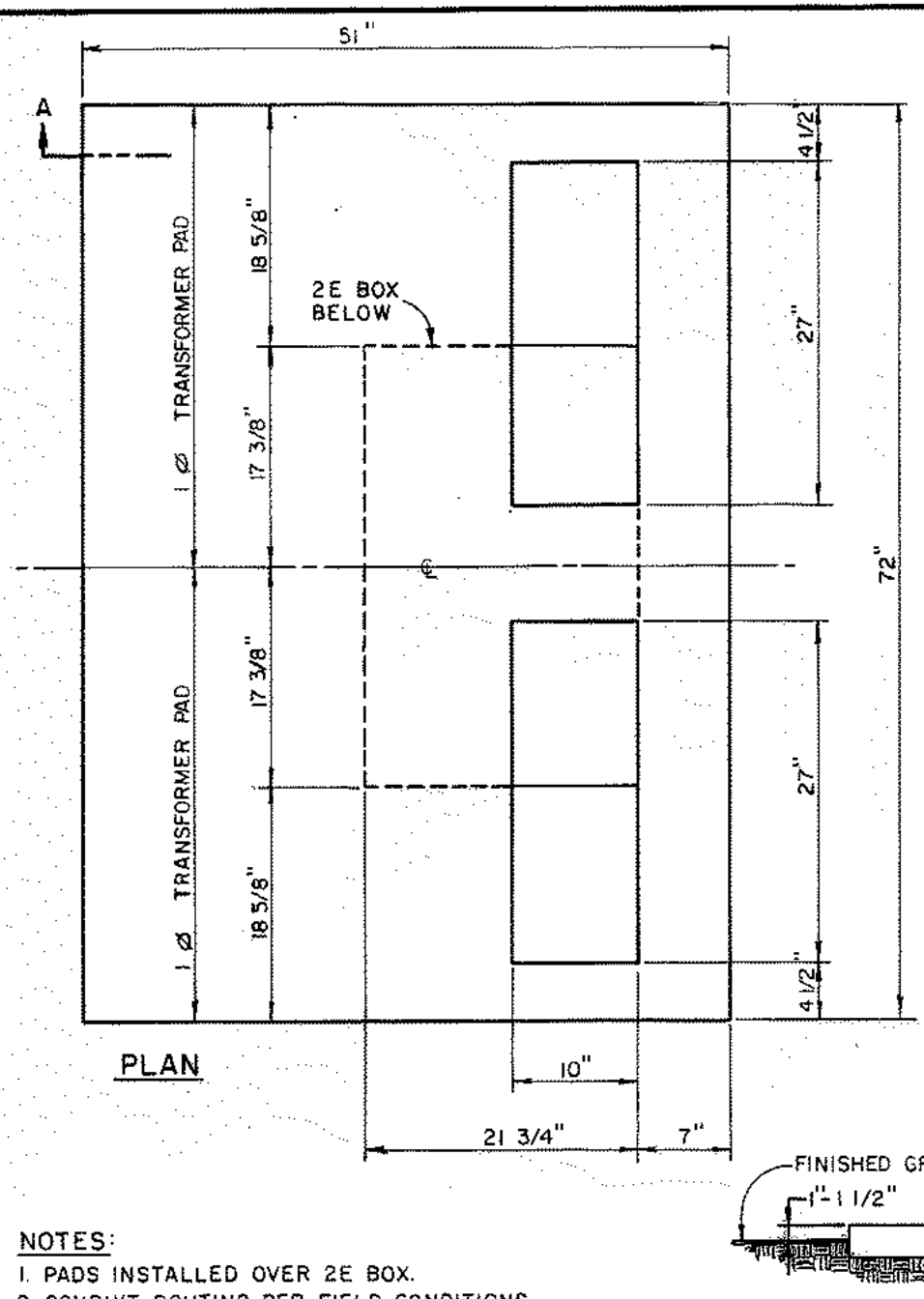
NOTES:

1. PRIOR TO POURING PAD HAVE ELECTRIC DEPARTMENT INSPECT CONDUIT LOCATION.
2. MIN. CLEARANCE FROM BUILDINGS OR OTHER OBSTRUCTIONS TO BE: BACK=3', SIDES=5', FRONT=8'.
3. COMPACTION UNDER AND AROUND PAD.
4. CONTACT ELECTRIC DEPARTMENT FOR DIMENSION.
5. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
6. MINIMUM DEPTH:
   PRIMARY CONDUIT = 30"
   SECONDARY CONDUIT = 24"
7. MINIMUM SWEEP RADII:
   PRIMARY CONDUIT = 36"
   SECONDARY CONDUIT = 30"



NOTE: CONDUIT SHALL BE PVC TC-6 (P&C)

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO. E-15
DES: _____ DWN: I.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rollo 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS TRANSFORMER PAD 750 KVA TO 2500 KVA (3 PHASE)
	DWG. NO. 62



NOTES:

1. PADS INSTALLED OVER 2E BOX.
2. CONDUIT ROUTING PER FIELD CONDITIONS.
3. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO. E-16
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: Ray D. Rees 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS PAD MOUNT TRANSFORMER OPEN DELTA
	DWG. NO. 63