DEVELOPMENT HANDBOOK

TAHOE-RENO INDUSTRIAL CENTER

STOREY COUNTY, NEVADA

Drafted By The Architectural Review Committee
of the TRI Owners Association, a Nevada nonprofit corporation

First Edition, approved on February 1, 2000

EXHIBIT "C"

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ARTICLE I
INTRODUCTION

This Design Handbook is promulgated by the Architectural Review Committee of the TRI Owners Association to provide standards for construction of improvements in the Tahoe-Reno Industrial Center in Storey County, Nevada. The concept for Tahoe-Reno Industrial Center ("TRI Center") envisions industrial and commercial parcels unified by a framework of vehicular circulation, utility infrastructure and landscape/open spaces, for a distinctive identity through project build-out.

The purpose of the Site Design Guidelines (Article VI) is to provide development guidelines for each building site, so that the project is developed with a consistent quality over time in a manner that will enhance TRI Center's overall image and value. The Site Design Guidelines shall be binding on all owners who propose to construct a building or improvements on a site while the Declaration Of Covenants, Conditions And Restrictions for Tahoe-Reno Industrial Center recorded on February 19, 1999 as Document No. 84415 in the office of the Recorder of Storey County, Nevada ("CC&Rs") are in effect. No improvements shall be constructed within a site without having first been approved by the Architectural Review Committee ("ARC"). The ARC has been established to administer the design review and approval process for plans regarding all site improvements.

The purpose of the infrastructure design portions of this Handbook (Articles VII through IX) is to assure that the public is protected by providing safe and orderly public infrastructure and developments, by establishing minimum requirements for design and construction. The requirements, unless otherwise noted, apply to public and private improvements which will be used by the general public. Articles VII through IX make reference to and are to be used in conjunction with the Standard Specifications for Public Works Construction and Standard Details for Public Works Construction, latest editions. Sewer and water facilities and extensions are not included in this Handbook, since this infrastructure is governed by the Company Rules, as defined below in Subsection 1.6 of Article II.

This Handbook is intended to cover only normal situations encountered in design. It can be expected that engineering problems will arise which will not be completely covered. Therefore, any items or situations not included in this Handbook shall be designed in accordance with accepted engineering practices, including (as applicable) the Standard Specifications for Public Works Construction, Standard Details for Public Works Construction, and shall be subject to the approval of the ARC. Unusual or extraordinary situations may arise with respect to situations covered. In such cases, the ARC may at its discretion authorize alternative standards, provided that any such alternative standards are in accordance with accepted engineering practices.

The owners and prospective occupants of each site should become familiar with the intent and requirements of applicable government codes. No requirements of government codes, laws and regulations are superceded by the provisions of this Handbook. Proposed site development plans shall be submitted to the ARC for review and approval as described in the design review process, Article V.

This Handbook is intended as a guide to site owners and their design and construction professionals and, in combination with the CC&Rs, is intended to provide design and planning parameters so owners may plan, design, build, and use improvements. This Handbook has been developed by the ARC pursuant to the provisions of the CC&Rs. In the event of any conflict between this Handbook and the CC&Rs, the CC&Rs shall control.

ARTICLE II
PROJECT OVERVIEW

Section 1. Location.

The Tahoe-Reno Industrial Center ("TRI Center" or "project") is located in Storey County, Nevada, approximately seven miles east of the Reno-Sparks area on the I-80 freeway. The project is a 15-minute drive from the Reno-Tahoe International Airport. The main entrances to the project are the Patrick and Tracy interchanges from I-80. The Union Pacific Railway and the Burlington Northern Santa Fe Railway tracks border the project on the north and serve selected areas of the project.

Section 2. Background.

TRI Center is a portion of the former Asamera Ranch, a 102,000 acre tract of private land owned by one of the project master developers, Tahoe-Reno Industrial Center, LLC, comprising approximately 54% of the land area of Storey County. Storey County is a sparely populated rural Nevada county. Its small population is primarily centered in the Virginia City area, southwest of the project, which is not connected to the TRI Center by paved roads. Figure 1 shows the general location of the project. Figure 2 shows the project area at a larger scale. TRI Center currently consists of approximately 6,000 acres zoned for industrial use, and may expand in the future subject to Storey County approval.

TRI Center is intended to be a mixed use nonresidential development consisting of a wide range of industrial, office and commercial businesses. Figure 3 illustrates the conceptual land use plan for a portion of the project.

Development of the project is guided by a development agreement between the master developers and the county (Attachment A (without exhibits)), which incorporates this handbook and the Storey County Zoning Ordinance (Attachment B). A legal description of the project is Attachment C.

The entire project is zoned "I-2 Heavy Industrial" under the zoning ordinance, which category allows almost all types of industrial and commercial uses. The terms of the development agreement and the zoning ordinance allow maximum flexibility for land uses, but provide for a consistent, compatible development theme among the various land use possibilities in the actual project siting. The project CC&Rs and this Handbook further refine the uses allowed in the development process. In the spirit of "performance zoning", any use that complies with the zoning and the CC&Rs, and any development plan which complies with this Handbook, is permitted to be developed.

Section 3. Project Entitlements And Approvals.

On July 1, 1999 the Storey County Zoning Ordinance was adopted (Attachment B). As mentioned above, all of the TRI Center was zoned at that time "I-2 Heavy Industrial", which allows most industrial uses without any further discretionary permits, such as special use permits or conditional use permits. A few high-impact heavy industrial uses require special use permits (e.g.,

blast furnaces, explosives manufacture, chemical production). See Chapter 17.37 of Attachment B for a complete list. Most industrial uses can go straight to architectural review and building permits in order to develop. Commercial uses are allowed subject to county site plan review in an amount not to exceed 10% of the total land area and also require no additional permitting.

On _____ the Development Agreement for the project was approved by Storey County, executed by the parties and incorporated into ordinance (Attachment A). This Handbook is a part of the Development Agreement. The agreement has several other components, including: limitations on new county development regulations, fees and exactions; county commitments for services (streets, flood control, parks, police and fire safety, administrative support) and for infrastructure reimbursement (streets, freeway bridges and ramps, flood control, parks, public safety improvements, parks, rail facilities); approval of private water and sewer service; and development processing.

As a result of these entitlements, TRI Center has no state or local government development fees or exactions (e.g., no special government impact fees or connection fees to pay for schools, roads, utilities, sewer or water, or any other purposes). The only connection fees of any kind are charged by the private water and sewer provider, TRI Water And Sewer Company, and these fees are fixed under the Development Agreement and the Company Rules.

The master developers are allowed, at their discretion, to develop under the industrial subdivision map process proscribed by the state law. These maps will not adversely affect industrial site development requirements.

The CC&Rs are recorded provisions governing use and development in the project. The CC&Rs establish the TRI Owners Association to own and maintain common area (primarily landscaping, rail facilities and open space), as well as the Architectural Review Committee ("ARC") to process and approve all development proposals for conformance with design guidelines. The CC&Rs provide for assessments payable by TRI Center owners, prohibit and restrict uses, and provide enforcement standards and procedures to insure, protect and preserve quality development and operation of uses in the project.

Once the ARC has approved a site development plan, a building permit can be submitted to Storey County. County staff will then review the site plans for consistency with the development agreement standards and county ordinances.

Section 4. Project Issues.

When assessing development feasibility of any specific site in any development project, certain topics usually arise for review, including wetlands, seismic activity, street access, storm drainage, water and sewer service, other utility services, environmental status, soils and site preparation constraints, environmental issues and permitted uses. These project issues are introduced below, with references to sources for additional or more specific information.

Subsection 4.1 Wetlands. TRI Center is located in a high desert environment. There are no delineated wetlands in TRI Center. The Truckee River flows near the northern project boundary.

There are no streams or springs on building sites in the project. Several washes and gullies run water during storm events and spring runoff, but building sites generally are not located in these areas. The master developer does not intend to sell as development sites any areas which are classified as wetlands under federal law, if any exist in the project.

Subsection 4.2 Seismic Activity. There is no known earthquake damage potential on the project any different than anywhere else in the surrounding area. Faulting and earthquake potential exists in Northern Nevada. No special construction techniques will be needed on most sites in the TRI Center to mitigate the variable earthquake damage potential, but site specific investigations with appropriate geotechnical and structural recommendations may be necessary for each individual development project.

Subsection 4.3 Traffic and Access. Streets within the project will be designed and constructed to carry traffic adequately as development occurs. Generally, individual sites have street access when sold, or the master developer constructs necessary off-site access prior to completion of site development. Storey County accepts dedication of all improved public streets and maintains them (including snow removal) after completion.

The Patrick and Tracy Interchange of I-80 provide freeway access to the project. Both interchanges are anticipated to be upgraded when needed as traffic volumes rise. The Tracey Interchange is planned to be relocated to the east of its current location in order to be the primary project entry. Storey County has committed through the project development agreement to financing all interchange and access road construction costs, if state and federal funding sources are not provided.

Subsection 4.4 Storm Drainage. Major storm drainage improvements (i.e., flood channels and basins) are constructed by the master developer as development occurs. Storey County has committed to reimburse these construction costs. Site developers are required to design and construct on-site storm drain facilities to contain the 5-year flood event on site, which are not reimbursable. Storey County will maintain major storm drainage improvements. Parcel owners will own and maintain on-site improvements.

Subsection 4.5 Water and Sewer Service. A private utility company, the TRI Water And Sewer Company, supplies community water and sewer service. The water resources come from groundwater approved by existing state permits and pumped from wells on the project. Additional wells, tanks and distribution lines are constructed as development occurs. Sewage treatment is provided for TRI Center from treatment plant facilities within the project and the effluent disposal system is designed for reuse in irrigation or industrial applications. The state approves all water and sewer facility designs and the county has approved the company's operating rules and regulations, including connection fees and rates, which are available upon request. The Nevada Public Utility Commission does not regulate the private water and sewer purveyor as a public utility.

Subsection 4.6 Other Utility Services. Sierra Pacific Power Company provides electrical power and natural gas from main transmission lines at the north end of the project. Line extensions for power and gas meeting normal industrial demands are supplied to individual sites by the master developers. Sierra Pacific Power Company is a regulated public utility.

Telephone and cable TV (as well as power) are supplied from overhead lines to individual sites. Nevada Bell provides telephone service and TCI supplies cable TV.

Subsection 4.7 Soils And Site Grading. Soils testing and site grading design for each site must be performed by each site developer. In general, extraordinary soils problems for industrial and commercial uses have not been encountered with soils in TRI Center. Industrial site characteristics, however, will vary.

Subsection 4.8 Environmental Status. Most areas in the project are arid undeveloped open space and have not been previously used by man, except for sparse livestock grazing, so man-caused environmental problems are generally not an issue. The master developers perform will make available blanket "Phase I" site evaluations on the Project. Air quality permitting by the Nevada Department of Environmental Protection may be required for uses which discharge pollutants into the air.

Subsection 4.9 Zoning/Permitted And Prohibited Uses. As mentioned above, Chapter 17.37 of the Storey County Zoning Ordinance (Attachment B) defines the "I-2 Heavy Industrial Zone", which is the zoning classification for the entire project. The ordinance incorporates light industrial zoning and commercial zoning (up to 10% of total land area). Most types of industrial uses are permitted outright. Only a few uses require special use permits (Attachment B, p.____), so the vast majority of industrial users in TRI Center can develop individual sites with a county building permit.

Commercial uses are specified in Chapter 17.28 of the ordinance (see, Attachment B). No special use permits are required of commercial uses. Site plans for commercial uses are reviewed by county staff as part of the building permit process for conformance with the zoning code.

The CC&Rs do not prohibit industrial uses beyond the minimal zoning code prohibitions, but contain some restrictions on certain allowed uses. The site design guidelines in this Handbook further proscribe how allowed uses may be developed.

ARTICLE III
DEFINITIONS

Section 1. Definitions.

The following words and phrases, when used in this Manual, shall have the meanings respectively ascribed to them:

Subsection 1.1 "ARC" means the Architectural Review Committee established by the Association pursuant to the CC&Rs.

Subsection 1.2 "Association" means the TRI Owners Association, a Nevada nonprofit corporation, as described in the CC&Rs.

Subsection 1.3 "CC&Rs" means the Declaration Of Covenants, Conditions And Restrictions For Tahoe-Reno Industrial Center recorded on February 19, 1999 as Document No. 84415 in the office of the Recorder of Storey County, as amended from time to time.

Subsection 1.4 "Code" means the Storey County Zoning Ordinance, which is Ordinance No. 159, Storey County Code Title 17, enacted July 1, 1999. The Code is attached as Attachment B for reference.

Subsection 1.5 "Company" shall mean the TRI Water And Sewer Company, a Delaware corporation, which supplies community water and sewer service to the Project pursuant to the Company Rules.

Subsection 1.6 "Company Rules" are the Rules, Regulations And Rates Of The TRI Water And Sewer Company For Water Service and the Rules, Regulations And Rates Of The TRI Water And Sewer Company For Sewer Service, as promulgated by Company and amended from time to time, subject to the required approvals by County.

Subsection 1.7 "Construction Standards" means "The Standard Details for Public Works Construction" and "The Public Works Design Manual" as adopted by the ARC.

Subsection 1.8 "County Board" means the Storey County Board of County Commissioners.

Subsection 1.9 "Developer" means any party who causes property to be improved or developed.

Subsection 1.10 "Development" means any man-made changes being made to real property in TRI Center.

Subsection 1.11 "Director of Public Works" means that official charged with the title of Director of Public Works of the County of Storey, or his/her designee.

Subsection 1.12 "Drainage Plan" means a plan prepared and sealed by a Nevada Registered Professional Civil Engineer, for the collection, transporting, treatment and discharge of stormwater within and from a Development.

Subsection 1.13 "Drainage Report" means a technical engineering report prepared and sealed by a Nevada Registered Professional Civil Engineer, whose purpose is to identify and define drainage characteristics associated with a proposed development and to define possible problems and conceptual solutions. In its final form, the drainage report shall transform the defined conceptual solutions to a final drainage plan.

Subsection 1.14 "Engineer" means any person who is retained as a consultant by the owner/developer and is legally authorized to practice civil engineering in the State of Nevada in accordance with NRS Chapter 625, and includes Project Engineer as used in this Handbook.

Subsection 1.15 "Fire Chief" means that official charged with the title of Fire Chief of Storey County, or his/her designee.

Subsection 1.16 "Major Drainage Facility" means a channel that has a drainage basin of 100 acres or greater.

Subsection 1.17 "Master Developer" means collectively DP Operating Partnership, L.P., a Delaware limited partnership, but only as to that portion of the Property (which is also a portion of the Project) described on Exhibit "A" as the "DPOP Property", and Tahoe-Reno Industrial Center, LLC, a Nevada limited liability company, as to the remainder of the Property, together with successors in interest to all or any portion of their respective Property.

Subsection 1.18 "Mechanical Stabilization" means the application or use of structural measures such as rock rip-rap, gabions, turf stone or an approved equal, to provide sufficient soil cover to prevent soil movement by action of wind or water. Stabilization may include incorporation of vegetative measures if approved, so that in combination the structural and vegetative measures will provide the same level of protection that structural measures alone would provide.

Subsection 1.19 "Natural Watercourse" means a natural creek, stream or river, or a gully, ravine or other depression through which surface water flows naturally on an intermittent basis.

Subsection 1.20 "NRS" means Nevada Revised Statutes.

Subsection 1.21 "Owner" means the person, partnership, firm, corporation, or association having sufficient proprietary interest in the land sought to be developed to commence and maintain proceedings to develop the same under this Handbook.

Subsection 1.22 "Parcel Map" means a map filed pursuant to NRS 278.461 to 278.469 inclusive, which creates 4 or fewer lots or parcels.

Subsection 1.23 "Record of Survey" means a map other than a parcel map filed pursuant to NRS which creates a separate legal parcel.

Subsection 1.24 "Stable Rock" means a rock slope that will stand near vertical and provide stability against weathering.

Subsection 1.25 "Standard Specifications" means the Washoe County "Standard Specifications for Public Works Construction" hereinafter referred to as SSPWC, as adopted by the ARC.

Subsection 1.26 "Street-Private" means a way for vehicular traffic to access two or more parcels which is to be owned and maintained by parties other than the Association or the County.

Subsection 1.27 "Street-Public" means a way for vehicular traffic owned by County or by Association and designed for general public use, whether designated as a street, freeway, highway, parkway, throughway, road, avenue, drive, lane, boulevard, place, or however otherwise designated, but not including alleys or private streets.

Subsection 1.28 "Surveyor" means a person who is retained by the owner or developer and is currently licensed to practice land surveying in the State of Nevada in accordance with NRS Chapter 625.

Subsection 1.29 "TRI Center" means the Tahoe-Reno Industrial Center located in Storey County, Nevada.

Subsection 1.30 "TRI Center Engineer" means that person charged with the title of TRI Center Engineer by appointment of the ARC, or his/her designee.

Subsection 1.31 "TRI Center Standards" means the adopted edition of "Construction Standards" and "Standard Specifications", as defined herein.

ARTICLE IV
ADOPTION OF BUILDING CODES AND STANDARDS

All construction within TRI Center shall comply with the following codes and design manuals:

Uniform Building Code Volumes 1, 2 and 3	1994 Edition
Uniform Plumbing Code	1997 Edition
Uniform Mechanical Code	1994 Edition
National Electrical Code	1996 Edition
Uniform Code for Building Conservation	1994 Edition
Uniform Fire Code	1994 Edition
Uniform Administrative Code	1994 Edition
The Standard Specifications For Public Works Construction (Regional Transportation Commission of Washoe County	Edition
The Public Works Design Manual	latest Edition

If the ARC or the county, pursuant to the Development Agreement, adopt different editions of these codes or manuals, then the subsequently adopted editions shall apply. The ARC may adopt or otherwise use other industry standards which augment these references or cover subject matter not covered therein.

ARTICLE V
DESIGN REVIEW PROCESS

Section 1. Introduction.

To ensure that the design standards for the TRI Center are followed, a series of plan submissions to the ARC will be required at different stages of the design process. All buildings and landscaping plans shall be designed by a licensed professional registered in the State of Nevada and shall bear the professional's license number and seal when submitted for design review. All submitted plans are reviewed by the ARC for acceptability of design in compliance with the CC&Rs and this Handbook.

The guidelines and requirements of this Handbook are in no way intended to supersede any applicable statutes, codes, ordinances, or regulations of controlling governmental jurisdictions, except in the limited instances approved as part of the project Development Agreement. The applicant shall have the sole responsibility for compliance with all applicable statutes, codes, ordinances, or other regulations for all work performed on the premises by or on behalf of the applicant. The ARC's approval of submitted documents does not imply or assure that federal, state, or local requirements have been met.

Section 2. Approvals.

Upon completion of review by the ARC, one set of submitted plans will be returned to the applicant along with a letter summarizing comments, recommendations, requirements, and findings. The returned plans will be marked "Approved", "Approved Subject to Conditions", or "Not Approved".

1. **"Approved"** - Approved documents permit the applicant to proceed to the next stage of the approval process.

2. **"Approved Subject to Conditions"** - Documents so marked permit the applicant to proceed to the next stage of the approval process, provided the applicant complies with the conditions specified by the ARC. If the applicant takes exception to the specified conditions, the applicant must do so in writing to the Committee within 10 days from the date of the applicant's receipt of the returned documents. Unless such action is taken, the Committee will assume that all conditions are acceptable to the applicant.

3. **"Not Approved"** - These documents will be returned to the applicant with comments describing the basis for disapproval. Revised documents must be resubmitted if approval is sought.

Section 3. Pre-Design Conference.

To establish the design concept, the owner or architect should schedule a Pre-Design Conference with the ARC or its designated representative to discuss and consider approaches, ideas,

and designs and to review any preliminary design sketches that have been prepared. The ARC will review the design approach in order to provide preliminary confirmation of adherence to the Handbook and the appropriateness of the design concepts. There is no review fee for the Pre-Design Conference.

Section 4. Preliminary Plan Submittal (New Development).

The Preliminary Plan submission is required to convey specific information about the site planning and architecture of the proposed development. The Preliminary Plan package must be submitted to the ARC prior to submission of the plans to the county. Preliminary plans are to be submitted and approved before construction documents are submitted. Four sets of plans containing the specific information described below shall be submitted with a $1,000 review fee.

The Preliminary Plan submission requires each of the following exhibits:

1. Site Plan indicating the following:
   a. Building footprints and dimensions to property lines.
   b. Building roof overhangs.
   c. Configuration of parking and vehicular circulation areas.
   d. Location of parking lot lighting.
   e. Truck service, loading area, screening, trash enclosures.
   f. Lines of setbacks and easements.
   g. Locations of on-site transformers, electrical switch gear, and gas meters.
   h. Adjacent roadways including curblines, medians, and median openings.
   i. Tabulations of:
      - Parcel area
      - Total building floor area
      - Site coverage
      - Building coverage
      - Total parking provided
      - Total parking required

2. Conceptual Grading and Drainage Plan indicating:
   a. Proposed finish grades, slopes, and building pad elevations.
   b. Site drainage structures and systems.
   c. Grades of existing streets and curbs.
   d. Locations of street lighting and utility structures.

3. Conceptual Landscape Plan indicating:
   a. Plant materials, sizes, and spacing.
   b. Locations of landscaped areas and disturbed areas to be revegetated.
   c. Walkways and paved areas.
   d. Other landscape design features.

4. Building Elevations of all sides of all proposed buildings indicating:
   a. Wall and roof materials, textures and colors.

b. Locations of wall-mounted signs and lighting.
c. Roof and parapet heights above ground floor line.
d. If applicable, view of building from I-80 freeway indicating the street elevation as a basis of reference.

5. Building Roof Plans indicating:
   a. Roof elevations above finish floor.
   b. Heights and locations of roof-mounted mechanical equipment.

6. Outline specifications of all building materials, including samples of colors and exterior building materials.

7. Conceptual Graphics and Wall-Mounted Signs:
   a. Ground signs and wall-mounted signs:
      ▸Locations
      ▸Designs, materials, textures, colors, heights, size
      ▸Illumination
      ▸Typography
   b. Directional and information signs:
      ▸Locations
      ▸Designs, materials, textures, colors, heights, size
      ▸Illumination
      ▸Typography

8. Identification and explanation of any instances where the proposed design deviates from this Handbook or the CC&Rs.

9. Compliance Checklist

Section 5. Construction Document Submittal (New Development).

The construction document submission requires four sets of the following:

1. Final Grading and Drainage Plan.
2. Architectural, structural, mechanical, plumbing, and electrical drawings.
3. Construction Specifications.
4. Landscape Planting and Irrigation Plans including paving, walls, signs, and lighting.
5. Compliance Checklist.

All applicants are required to submit copies of the same construction documents approved by the ARC to Storey County for approval in order to demonstrate the precise construction details for implementing the approved Preliminary Plans.

Section 6. Preliminary Plan Submittal (Alterations or Additions).

Preliminary plans may be required to be submitted for major revisions, alternations or additions to approved or existing developments within the project which alter the exterior of building, or add structures to the site. A determination of whether plan review is required will be made by the ARC. All owners must submit concept summaries of proposed major revisions, alterations or additions in order to acquire ARC determinations of whether plan reviews will be necessary. Preliminary plans which are required must be submitted and approved before construction documents are submitted and before the commencement of construction. Four sets of plans shall be submitted with a $1,000 review fee.

The Preliminary Plan submission requires each of the following exhibits (if applicable):

1. A written description of the nature and extent of the proposed revision, alteration or addition to be undertaken.

2. Indications of proposed revisions, alterations, additions, or changes to:
   a. The site plan.
   b. The grading and drainage plan.
   c. The landscape plan.
   d. The building elevations including:
      - Wall and roof materials, textures, and colors
      - Locations of wall-mounted signing and lighting
      - Roof and parapet heights above the ground-floor line
   e. The building floor plans.

3. Tabulations of:
   a. The new total building floor area.
   b. The new site coverage.
   c. The new building coverage.
   d. The new parking provided.
   e. Calculations demonstrating the new required parking.
   f. Water usage and dedication requirements.

4. Outline specifications of construction materials, including samples of colors and exterior materials.

5. Explanation of any instances where the proposed revision, alteration or addition deviates from this Handbook or the CC&Rs.

6. Compliance Checklist.

Section 7. Construction Document Submittal (Alteration, Addition, or Change of Use).

All applicants are required to submit copies of the same construction documents stamped approved by the ARC to Storey County for approval in order to demonstrate precise construction

details for implementing approved preliminary plans. The construction document submission requires four sets of the following:

1. Final grading and drainage plan.
2. Architectural, structural, mechanical, plumbing, and electrical drawings.
3. Construction specifications.
4. Landscape planting and irrigation plans including paving, walls, signs, and lighting.
5. Compliance Checklist.

Section 8. Variances.

The Committee may grant variances from the provisions of this Handbook in cases where literal application of the standards would result in unnecessary hardship or if the granting of the variance will, in the opinion of the ARC, not be materially detrimental or injurious to other owners in the TRI Center. The Preliminary Plan Submittals for new development and for revisions, alterations, additions, or changes of use require the applicant to identify and explain any proposed deviations from this Handbook or the CC&Rs. If plans are approved without the applicant identifying and explaining proposed deviations, and without the ARC granting a variance, the undisclosed aspect of the plans which so deviate shall be deemed to be disapproved, despite the approval of the ARC. The granting of a variance in one circumstance shall not constitute a precedent for future variances, nor shall it be deemed a waiver of the design standard subject to the variance in future instances.

Section 9. Construction Commencement.

Upon approval by the ARC, the plans are ready for building permit application and construction. Along with the ARC's approval a refundable construction deposit, which must be submitted to the ARC prior to beginning construction. The construction deposit is $500 per acre with a maximum of $5,000 per project. These funds will be used by the ARC or the master developer to repair damage caused by construction personnel or equipment to off-site property or used to clean construction debris on or leading from the site. Deposits will be refundable, less deductions, upon completion of the job and submittal of as-built drawings to the ARC.

During construction, all owners and general contractors must abide by the following rules:

a. Construction sites shall be maintained in a neat and orderly fashion. Debris shall be removed. The owner and general contractors are responsible for the conduct of all subcontractors and materialmen associated with site construction.
b. No debris shall be dumped onto any off-site parcels.
c. All construction signs must be approved by the ARC.
d. Noise and lighting must be subdued in order to avoid unnecessary disturbance of other project owners.
e. The source of construction water must be specified by the ARC.

f. Dust shall not be emitted from any site and contractors must comply with the all air quality requirements of the State Health Department and Storey County.

g. If haul routes are identified by the ARC, general contractors and subcontractors must use those routes.

h. Dirt on the streets must be immediately cleaned up.

i. All vehicles (e.g., employees, construction, service) must be parked on the parcel or other approved area. All vehicles and equipment that are not in use must be parked on the parcel or other approved area.

j. No construction materials shall be stored on other project parcels.

k. Waste materials must be hauled away unless a disposal site is identified on the site by the ARC.

Section 10. Construction Completion.

Upon completion of all construction, the ARC may make a final site inspection. As-built drawing shall be submitted to the ARC and shall include a certificate signed by the architect, engineer, and landscape architect that the project has been built in accordance with the approved plans. Construction shall be completed within 15 months of approval of the plans by the ARC, unless otherwise specified, or unless construction time is extended by the ARC. Landscaping must be completed within 30 days of issuance of a certificate of occupancy by Storey County, unless weather causes delay, in which case as soon as practicable thereafter.

Section 11. No Liability.

Inspection of improvements by the ARC, construction in accordance with approved plans, or failure to construct in accordance with approved plans shall not subject the ARC to liability from the applicant or any third party due to any latent or patent defect in design or construction. The ARC disclaims as such liability, and may decline to inspect improvements at all.

Section 12. Compliance Checklist/ARC Approval.

Upon final plan approval of construction plans, an ARC representative shall sign the compliance checklist of the applicant. The checklist must be submitted to Storey County officials with the building permit to certify review and approval by ARC, which is a precondition to approval of a building permit by Storey County. The ARC shall keep and maintain final construction plans.

Section 13. Handbook Amendments.

This Handbook may be amended at any time by the ARC without advance notice to owners or occupants. Buildings or improvements shall be constructed in accordance with the Handbook standards in effect as of the date submittal of preliminary plans by the applicant.

Section 14. Enforcement, Governing Law and Severability.

The TRI Owners Association shall have the right (but not the duty or obligation) to enforce the provisions of this Handbook. Such enforcement shall be in the form of any proceeding at law or in equity against the person(s) or entity(ies) violating or attempting to violate this Handbook provided, however, that any failure by the Association to enforce the provisions of these design guidelines shall not be deemed a waiver of such right. In the event of any arbitration or litigation pursuant to this Handbook, the prevailing party shall be entitled to recover reasonable attorneys' fees and costs from the non-prevailing party. The provisions of this Handbook and all questions relating to their validity, interpretation, and enforcement shall be governed by and construed in accordance with the laws of the State of Nevada. Invalidation of any one or more of the provisions of this Handbook shall not have the effect of rendering any of the other provisions hereof illegal, inoperative, unenforceable or invalid.

Section 15. Inspection, Testing, Verification and Quality Assurance Program (applies only to improvements to be dedicated to Company, Association or County).

Subsection 15.1 General. It is the intent of this chapter to set forth the requirements and responsibilities of those parties involved in the inspection, testing, verification, and acceptance of infrastructure improvements or other new construction which will be dedicated to Company, Association or County, as well as to provide consistent and satisfactory quality of such improvements.

All new construction shall have an Engineer of Record (EOR), when required by the ARC, retained by the Owner and reporting to the TRI Center Engineer. The contractor may retain the EOR. The EOR may be the contractor. The EOR shall be responsible for all inspection, testing and verification of the constructed improvements as to compliance with this Handbook, the improvement plans of record and with TRI Center Standards. The EOR is not responsible for means, methods, techniques, sequences or procedures of construction nor safety of the construction site. The EOR shall be a licensed Engineer. In addition, all new construction requiring an EOR shall have a testing firm responsible to the EOR and reporting to the EOR.

Subsection 15.2 Responsibilities.

1. Owner

a) Shall retain the services of an EOR.

b) Shall retain the services of a testing firm which shall be responsible to the EOR and report to the EOR.

c) Shall make every reasonable effort to retain as the EOR, the services of the firms or persons responsible for the preparation of the approved soils report and the improvement plans of record.

d) Shall retain the services of a contractor and notify said contractor of the requirements of this Handbook.

e) Shall be responsible to the ARC for the adequacy of completed work covered under this Handbook. Any defective material, equipment, or workmanship, or any unsatisfactory work which may be discovered before final acceptance, or within 1 year thereafter, shall be corrected immediately on the requirement of the EOR or TRI Center Engineer, without extra charge, notwithstanding that it may have been overlooked in previous inspections. Failure to ensure adequate inspection of the work shall not relieve the Owner from any obligation to perform sound and reliable work.

Subsection 15.3 Engineer of Record (EOR):

a) Shall initiate a pre-construction conference for construction of improvements at least one day in advance of initial construction. Representatives of the Owner, contractor, TRI Center Engineer, company, EOR and testing firm shall attend.

b) Shall provide a contact list with all parties' contact information to the Owner, contractor and the TRI Center Engineer, and shall also notify the participants of any significant changes in writing at least 2 working days in advance of implementing the changes.

c) Shall notify the TRI Center Engineer of the date that work shall commence.

d) Shall make available for review, prior to initiation of the preconstruction conference, the qualifications of the testing firm and the field inspection and testing technician personnel for the project.

e) Shall make inspection and verification of workmanship and materials in accordance with this Handbook. No work nor materials will be accepted without such inspection. The EOR will make every reasonable effort to perform inspection and testing services in a manner which will accommodate the construction schedule.

f) Shall make available to the TRI Center Engineer, on a bi-weekly basis, copies of the daily inspection/testing reports for the previous 2 weeks.

g) Shall immediately notify the TRI Center Engineer of any proposed changes from the improvement drawings of record that are in the EOR's opinion are major in nature.

h) Shall notify the Owner, contractor and the TRI Center Engineer, if during the course of construction the EOR finds that defective materials or workmanship not meeting TRI Center Standards have been constructed and not satisfactorily corrected by the contractor within one week of verbal notification to the contractor. The notification shall be supported by field reports and/or test results.

i) Shall, upon completion of construction of improvements, provide the TRI Center Engineer with a letter of verification on the format approved by the ARC, verifying the adequacy of the improvements; and, that construction, inspection, and testing

were performed in compliance with this Handbook, improvement plans of record and TRI Center Standards; and, provide sepia-mylars of any changes from the approved improvement plans of record or a statement that no changes were made: and, provide copies of inspection and test reports, if not already provided. The final completion and acceptance of all such improvements shall be subject to the approval of the EOR and Owner.

j) Shall sign and wet-stamp, or cause to be signed and wet-stamped by an Engineer, all drawings of record all reports, test data, and forward such to the ARC, Owner and the contractor.

k) Shall evaluate the performance of the EOR's field inspection personnel, however, the TRI Center Engineer shall have the authority to reject the selection of the testing firm, testing technicians or field inspection personnel for the project. The TRI Center Engineer shall also have the authority to reject the field inspection personnel or testing technician and direct substitute personnel in the event of unsatisfactory performance by said personnel in the opinion of the TRI Center Engineer.

Subsection 15.4 TRI Center Engineer:

a) Shall assign a primary contact to the EOR who shall serve as the TRI Center Engineer's representative during construction improvements. This primary contact shall be known as the TRI Center Quality Assurance Inspector (QAI). The qualifications of the QAI, as a minimum, will meet the qualifications of a Public Works Construction Inspector.

b) Shall attend the preconstruction conference initiated by the EOR.

c) Shall check periodically that inspection personnel are on-site during the construction of improvements. Should the QAI determine that personnel are not available on-site for inspection, the QAI shall immediately advise the EOR of the situation and so record the incident in his daily report.

d) Shall keep project report of construction activities he observes, including pertinent conversations with the EOR.

Subsection 15.5 Contractor:

a) Shall be responsible for construction of improvements. This responsibility shall include the means, methods, techniques, sequence, and procedures of construction and safety of the construction site. All such construction shall conform to the requirements of both the adopted and listed version of the Standard Specifications for Public Works Construction (SSPWC) and the requirements of this Handbook.

b) Shall attend the preconstruction conference initiated by the EOR. The Contractor shall verbally present a proposed construction schedule including construction

milestones, and designate a representative who has the authority to resolve issues during construction.

c) Shall provide accessibility and exposure of all construction work subject to inspection.

d) Shall notify the EOR one working day in advance of initiating construction or resuming construction after any unscheduled interruptions.

e) Shall be responsible for damage to all streets and utilities, or property of others.

Subsection 15.6 Inspection Requirements.

1. General:

For the purpose of implementing the requirements of this chapter, inspection shall mean the EOR or his field inspector shall be present periodically to observe the operations of the contractor during the designated construction activity.

2. Grading, Excavation, and Fills:

Periodic inspection of all materials, native or imported, to evaluate their compliance with the SSPWC and this chapter: that the subgrade is prepared according to the SSPWC; that all subgrade materials encountered are as expected according to the approved soils report, or if not, are appropriately addressed by overexcavation and stabilization with suitable material or as otherwise recommended in the approved soils report or by redesign of the pavement section.

3. Street:

Inspection to determine that alignment and grade of the street conforms to the improvement plans of record.

4. Underground Utilities:

a) Inspection of pipe materials and bedding prior to the placing of pipe to evaluate conformance with the SSPWC.

b) Inspection of installation of pipe laid to grade, mortar jointed or gasketed pipe prior to placing any material around or above pipe to evaluate conformance with the SSPWC.

c) Periodic inspection of each lift of backfill to evaluate conformance with the SSPWC.

d) Inspection for pipe installation, not including backfill, by utility company shall be the responsibility of the appropriate utility.

e) Inspection of construction and/or installation of manholes, catch basins, and drop inlets to evaluate compliance with the SSPWC.

f) Inspection of alignment and elevations to evaluate compliance with the improvement plans of record and specifications.

5. Aggregate Base Courses for Streets, Curbs, Gutters, Sidewalks, and Alleys: Inspection of all material brought to the site to evaluate uniformity with tested and approved samples; inspection of placement and compaction of aggregate base to evaluate compliance with the SSPWC and this Handbook and to confirm that grades conform to those specified in the improvement plans of record.

6. Reinforcing Steel, Forms and Falsework:

Inspection of reinforcing steel, forms, and falsework prior to placement of concrete to evaluate compliance with the improvement plans of record, specifications, shop drawings and the SSPWC.

7. Portland Cement Concrete:

Periodic inspection of all concrete pours including curb, gutter, sidewalks, driveway apron, alleys, valley gutters, structures, headwalls, slope paving and roadway pavement to evaluate compliance with the improvement plans of record, specifications, details, the SSPWC and this Handbook.

8. Asphalt Concrete:

a) Periodic inspection to evaluate compliance with the improvement plans of record, details, specifications, the SSPWC, and this Handbook.

b) Inspection at the plant may be required by the TRI Center Engineer or the EOR to monitor oil content, aggregate grading, mineral filler content and temperature.

9. Prime Coat, Tack Coat, Seal Coat and Surface Treatment:

Sufficient inspection to evaluate compliance with the SSPWC.

10. Sewer and Pressure Lines:

In addition to inspection required in Paragraph 4b above;

a) Sewer Lines: Ball and flushing operation shall be done in presence of the EOR or his field inspector and the Company sewer lines inspector.

b) Pressure Tests: To be accomplished in presence of the EOR or his field inspector to evaluate conformance with the SSPWC and this Handbook.

11. Landscaping within the public right-of-way or within a Public Improvement Easement, Common Area Amenities:

Sufficient inspections to evaluate compliance with SSPWC, the improvement plans of record, and specifications.

Subsection 15.7 Testing Requirements. Testing shall comply to the requirements set forth in the SSPWC.

ARTICLE VI
SITE DESIGN GUIDELINES

Section 1. Site Design Standards.

Subsection 1.1 Minimum Site Size. The minimum site size established by the Code for industrial sites at TRI Center is one acre for heavy industrial uses and 15,000 square feet for light industrial uses, but smaller sites can be approved by the county (see, Attachment A, Subsection 5.6). There is no minimum on commercial sites.

Subsection 1.2 Building Site Coverage. Site coverage (defined as the building-ground contact area divided by the total gross lot area) shall not exceed the following in each of the zones:

Heavy Industrial Zone	55%
Light Industrial Zone	50%
Commercial Zone	35%

Subsection 1.3 Building Height. Maximum building height is set by the Code, as summarized below:

Heavy Industrial Zone	6 stories or 75 feet
Light Industrial Zone	4 stories or 50 feet
Commercial Zone	3 stories or 45 feet

Proposed height of structures associated with industrial uses (which does not include silos, stacks and equipment) exceeding the above-referenced height limitations shall be subject to the issuance of a variance from the ARC and special use permit by the county.

Subsection 1.4 Building Setbacks And Landscape Buffer. Setbacks (distance from building structure to property line) required by the Code and landscape buffer areas required by these Design Guidelines, are outlined below:

	SIDE	REAR	FRONT
Heavy Industrial Zone	50/10*	50/10	50/10
Light Industrial Zone	20/10	20/10	20/10
Commercial Zone	20/10	20/10	20/20

*50/10 = 50' building setback with 10' minimum landscape buffer adjacent to parcel boundary line

Narrower setbacks can be approved (see, Attachment A, Subsection 5.6)

Setbacks and buffers shall be increased by 5 feet in all directions for parcels over 5 acres and over to 20 acres. Setbacks shall be increased by 10 feet for parcels 20 acres and above (i.e., a 21-acre light industrial parcel shall have 30/20 side, 30/20 rear and 30/20 front setback/landscape requirements). Setbacks must comply with railway company requirements.

Subsection 1.5 Building Exterior Boundaries. Buildings may be constructed in any configuration permitted by the Uniform Building Code and other adopted codes, manuals and regulations.

Subsection 1.6 Grading and Drainage. Minimum grade on plane-graded areas (paved or unpaved) and unpaved swales shall be 1 percent. Minimum grade on paved swales shall be 0.4 percent. Buildings within FEMA Flood Zone A (100-year flood) shall have the finished grade of the basement floor or the bottom of the lowest floor beam elevated to at least one foot above highest flood water elevation. Parking areas shall be graded to drain away from buildings.

If on-site storm water detention is required, parking areas may be used for detention, provided that the maximum water depth does not exceed 9 inches in automobile parking areas or 24 inches in truck parking areas. Erosion control procedures shall be provided on all parcels so that no water /soil erosion encroaches onto adjacent parcels.

Slope areas of 2:1 or flatter, less than 10 feet in height, may be provided with landscape treatments for stabilization. Slopes steeper than 2:1 may be acceptable in materials suitable for steeper slopes with ARC approval. Where concentrated surface drainage occurs on slopes, adequate measures shall be taken to prevent erosion, such as rip-rap or swales.

Subsection 1.7 Access and Circulation. Adjacent parcels are encouraged to share main access drives to parking areas. The minimum distance between intersections from the centerline of drives shall be as follow:

Arterial	235 feet
Collector	150 feet
Interior or local (except cul de sacs)	50 feet

The maximum width of drives shall be 35 feet for non-industrial uses. The maximum width of drives shall be 50 feet for industrial uses. Minimum distances for rail crossings must comply with railway company requirements.

Required planting areas for parking lots shall be coordinated with overall site planning and the locations of parking area lights. Curbs on-site will be optional and are discouraged to prevent concentration of run off. Curbs may be eliminated at truck maneuvering areas adjacent to loading docks on sides of buildings away from streets. Truck docks are acceptable, but should either face the internal side streets, or rear yard when possible to screen the truck area from view, except in cross-dock situations.

Truck trailer parking areas are covered in the Service And Utility Area section below. Adequate clearance and maneuvering room shall be provided on-site for all truck deliveries. No parking for automobiles, truck tractors, or truck trailers shall be designed to use streets or driveway access points.

Fire and emergency access shall be provided as required by the Uniform Fire Code.

Parking standards are covered in more detail below.

Subsection 1.8 Entrance Improvements. Street sections on all TRI Center streets may not include curb or sidewalk adjacent to roadway. Parcel developers are encouraged to upgrade their entrances with curb and gutter and turn pockets if necessary for on-site development.

Subsection 1.9 Service And Utility Areas. Utility areas provided for exterior storage, trash containers, equipment and other such uses shall not be allowed in the front setback. To ensure that all service, storage, and trash collection areas are properly screened while still allowing efficient collection, the following standards shall apply:

- Storage, service and maintenance areas shall be located either inside enclosed buildings or behind a visual barrier from public streets and adjacent parcels.
- Loading docks shall be set back from the front property line a minimum of 50 feet.
- Trash enclosures shall be screened. Transformers and utility equipment may share the same enclosure with the trash if properly sized.

Subsection 1.10 Existing Improvements. All owners shall coordinate new construction to retain existing improvements, including landscape and irrigation installed on street frontages.

Subsection 1.11 Mixed Use. Mixed land uses (i.e., commercial and industrial) on a single site may occur as allowed by the Code, and as approved by the ARC on a case by case basis.

Subsection 1.12 Screening of Exterior Mechanical Equipment In Commercial Areas. In areas of predominately commercial uses, exterior mechanical equipment visible from the upper floors of adjacent buildings shall be kept to a minimum, shall be designed in an orderly, compact manner, and shall be painted a color to blend with the adjacent background. All roof-mounted equipment shall be hidden from view with parapet walls or screening. Screens shall be attractive in appearance and reflect or compliment the architecture and color of the building. Mechanical equipment shall not extend above the enclosing wall or screen. Exterior-mounted electrical equipment shall be mounted in a location where it is substantially screened from public view. Exterior electrical equipment shall not be mounted on the street side of any building. Transformers visible from adjacent lots or streets shall be screened with plantings. No antenna, transmission, or reception device visible from ground level shall be permitted without specific approval of the Committee.

Section 2. Architectural Standards.

Subsection 2.1 Introduction. The purpose of this Subsection is to identify design criteria necessary to ensure both a consistent level of design quality and visual unity throughout TRI Center.

Warehouse and distribution facilities will make up a large portion of the users, and present a unique challenge to the architect or building designer. The very nature of the use of these facilities demands large structures that are as open as possible so as not to inhibit the free flow of goods within them. Large open floors without obstructions or intrusions lend themselves to the most efficient operations. These facilities require security for goods stored, require only a minimal amount of office spaces and thus discourage large quantities of glass. Glass, where used, is generally concentrated in office areas and commercial uses, or used to accent or interrupt long exterior horizontal or vertical walls.

Section 3. Architectural Styles.

Subsection 3.1 Contemporary Appearance. Though no one architectural style is required, all buildings will have a contemporary appearance (see, architectural style illustrations). This architectural style is typically utilized for larger buildings where the mass of the building predominates over artistic detailing. The architecture will feature clean lines and elements provided to reduce the apparent scale of large building walls and other features. Large professional office buildings shall emphasize glass in the architectural style. The use of classical or other period themes is prohibited. Where more than one structure is built in a complex or unit, structures shall have a similar style or theme. Architectural style should be simple with careful attention given to concentrate details and fenestration along main street elevations and at building entries. It is reorganized and acknowledged that the function and use of buildings, particularly large buildings and buildings used for manufacturing purposes as well as building sites with heavy reliance on truck or rail transportation, will dictate the style and other appearance of the structure. In these cases strict adherence to the provisions of this Section 3 may not be advisable or even possible. In those cases in which function and use of buildings and sites dictate design and exterior appearance the need to accommodate function and use should be the higher priority over design and appearance.

Subsection 3.2 Commercial Uses. Buildings in commercial areas may utilize contemporary or Mediterranean styles, and include additional architectural details for smaller buildings. Mediterranean style can be characterized by roofs of shallow pitch and clean building forms. Windows are typically simple recessed rectangular openings with various forms of ornamentation such as iron grilles, tile or plaster surrounds, and shutters. Doors may include more ornamentation and detailing than windows.

Subsection 3.3 Materials. Materials and construction techniques comparable in color, finish, durability and quality may be submitted for consideration by the ARC. The guidelines do not suggest or require that any particular manufacturer be used.

The use of pre-cast concrete, cast in place concrete or concrete tilt-up is encouraged. Masonry and/or split face concrete block is acceptable. Metal buildings are acceptable, subject to ARC review of building accents and partial masking front facades. Accented upgrade front office/entrance areas are encouraged, especially on large industrial buildings with little architectural detail.

Subsection 3.4 Color Schemes. There shall be a limited range of primary material colors. The goal of restricting the color palette is to create a timeless architectural environment where building structures and use of materials takes precedence over color schemes.

The main colors of buildings in the industrial zones will be earth tone with earth tone accent trim. Colors for commercial zones shall be complementary to surrounding industrial uses. The color palette for commercial building materials shall be limited to a maximum of three colors (main building color and two accent colors) that are generally visible from adjacent streets.

Subsection 3.5 Building Massing. The function and use of industrial buildings in general usually requires long rectangular buildings. Building mass shall be broken up by the creative design of entries and the use of color, texture, reveals, and landscaping.

Subsection 3.6 Roof Materials. All roofing shall be non-reflective and light in color, and generally compatible with the building wall colors. Roof pavers are acceptable, and must be harmonious in color with the other areas of the roof.

Subsection 3.7 Commercial Rooftop Screening. Roof-mounted equipment shall be screened on commercial buildings from view from adjacent streets, with architecturally integrated screens in commercial areas. Screening may be either integral to the building structure or added, freestanding elements. Roof parapets may be continuous, stepped or varied in height, or omitted where no roof mounted equipment is proposed. All roof apparatus, whether ventilation, HVAC, or other, shall be consistent in color with roof finish.

Subsection 3.8 New Technologies and Synthetics. The use of new technologies and materials, as well as the use of known technologies and materials in new ways and for new uses, is encouraged.

Section 4. Landscape Design Standards.

Subsection 4.1 Introduction. The TRI Center reflects the scale of the Great Basin of Nevada, with a combination of expansive vistas and adjacent dramatic mountain ranges. The intent of this landscape section is to reflect this visual character in ways to conserve natural resources for maintenance. The landscape development of sites shall create a hierarchy of landscape architectural elements, in order to generate landscape concentration and maximize aesthetic impact to the site.

Site landscaping shall be comprised of a mixture of improved landscape and native landscape areas. Improved landscape areas shall include at a minimum: trees; shrubs; ground cover; and permanent automatic irrigation systems. Native landscape areas shall include at a minimum native plant materials and a temporary irrigation system sufficient to reestablish native plant materials after land disturbance. Native landscape areas may also include areas that have not been disturbed by development, for which no irrigation shall be required.

Subsection 4.2 Reference Standards. The plant material of this Subsection shall conform to the nursery standards of the 1990 edition of the American Standard for Nursery Stock published by the American Association of Nurserymen (ANSI Z60.1-1990). Landscaping shall comply with the latest edition of Landscape Maintenance Specifications / Standards Manual, produced by the Nevada Landscape Association. Nomenclature for plant names and varieties shall be in accordance with the latest edition of "Standardized Plant Names" prepared by the American Joint Committee on Horticultural Nomenclature.

Subsection 4.3 Landscape Area Requirements. The minimum area of combined improved and native landscape at TRI Center shall be as follows:

Industrial Sites	6% of total parcel size
Non-Industrial Sites	15% of total parcel size

Areas off of the site may not be used as part of the minimum landscape area (i.e., right-of-way area between roadway pavement edge and the site property line). Improved landscaping shall be prioritized first to areas which are near streets, second to areas contiguous with the facility entrance and lastly in dock areas, rear yards and slope areas away from the street. The priority of improved landscape to native landscape shall be the same. The developer shall incorporate existing on-site vegetation into planting schemes whenever possible and not disturb native vegetation outside grading limits unless improved landscaping is being installed.

Disturbed areas of the site not otherwise indicated for landscape treatments shall be treated to prevent being a nuisance to others. This may include native revegetation or soil stabilization, and includes areas of future building expansion.

Subsection 4.4 Tree Count Requirements. Trees shall be planted at a rate of 1 tree per 500 square feet of required total combined landscape area (site area trees). In addition, 1 tree per 20 parking spaces shall be provided (refer to the Parking Area Landscape section). In addition, if a project has street frontage, one tree shall be required for every 40 feet of adjacent street frontage. All trees shall be selected from the attached Plant Materials Lists.

Subsection 4.5 Berms. Earth berms may be used along the street frontage areas and other portions of the site, as may be needed to moderate views into the site. The use of berms is encouraged to screen parking areas and reduce the apparent scale of the site by focusing attention on architectural features of the building entry area, where berms may be lower. Berms shall have side slopes along street frontages of 3:1 maximum, and shall be 36 to 48 inches high minimum. Berms shall be held back from drive areas to maintain visibility, and slopes shall be flatter at ends. Manholes, clean outs or other points of utility access shall be maintained during berm construction. Other ground surface configurations resulting from site grading may be submitted for consideration by the ARC.

Subsection 4.6 Commercial Site Landscape. Commercial sites are required to have improved landscape plantings on the entire front of the site within the full width of landscape buffers. Perimeter improved landscape does not necessarily have to be located at the rear or side property lines (e.g., native vegetation may suffice), but may serve as transition areas between built up and nondeveloped portions of the site.

Subsection 4.7 Parking Area Landscape. Site parking areas shall be provided with shade trees to reduce heat build up and glare from paved surfaces.

On commercial sites one planter area, the same size as a standard parking space, shall be provided at a minimum of one per 20 parking spaces for tree and shrub planting. Trees shall be provided at a rate of one per 20 parking spaces. Parking area planters shall be provided with concrete

curbs or other devices to prevent vehicles from damaging landscape. Evergreen trees shall be located to minimize shading of paved surfaces that create icy areas during periods of freezing temperatures.

On industrial sites, trees shall be provided at a rate of one per 20 parking spaces. Parking area planters are not required, but if used, may be provided without concrete curbs. Trees shall be spaced equally around the perimeter of the parking lot when planter islands are not provided.

Subsection 4.8 Sight Lines. Landscape treatments shall not interfere with visibility in an area three to six feet above grade at street or driveway intersections in a triangle of 30' as measured from the curb faces or edge of pavement. Additional clearance may be required where heavy truck traffic is anticipated. It shall be the responsibility of the property owner to cut trees and shrubs in landscape areas to maintain sight distances.

Subsection 4.9 Lawn. In order to promote water conservation, lawn areas shall constitute no more than five percent (5%) of the total site and shall be restricted on slope areas to ground which is 3:1 or flatter. Irregular and long narrow lawn strips should be avoided. Lawn areas shall have a minimum width of eight (8) feet. Lawn areas shall be configured and located to encourage use by employees and to be near pedestrian-related areas of the site.

Subsection 4.10. Ground Cover. Ground cover and shrub plantings may be used to soften and cool down improved landscape areas. Plants shall be spaced to provide at least forty percent (40%) coverage after a 5-year period. Mulches will be required in all improved landscape areas without ground cover. Mulches shall consist of either rock or a shredded bark, to a minimum 3-inch depth. The intent is to keep the soil in place during windy periods, retain moisture, discourage weed growth, and improve the overall aesthetic features of the site.

Subsection 4.11 Landscape Materials/Paved Pedestrian Areas. Materials used in the landscape shall be durable with a minimum of maintenance required. Pedestrian circulation between paved parking areas and building entries shall be paved.

Subsection 4.12 Plant Materials/Erosion Control. Plant materials shall be selected from the attached Plant Material Lists. Use of native and drought tolerant plants is encouraged. A list of recommended seed types is included for slope re-vegetation and erosion control. Since site soils are often very sandy and subject to winds, it will be important for developers to provide erosion control. Plants other than those listed in the Plant Material List may be proposed, provided that adequate documentation for such substitution is submitted to the ARC.

Subsection 4.13 Plant Material Sizes and Mix. Tree types shall include both deciduous and evergreen trees for every site, in an approximate 40 / 60 mix, respectively. Approximately 40% of all deciduous trees shall be 2" minimum caliper or larger; 60% of all deciduous trees may be 1-1 ½" caliper minimum. All evergreen trees shall be 6' minimum height. Reduction in total tree count may be authorized by the ARC if the landscape design incorporates mature (box) trees as part of the site landscape design.

Subsection 4.14 Irrigation. All improved landscaping on parcels shall have a permanent automatic irrigation system installed, operated and maintained by the owner or occupant. Drip

irrigation is required for shrubs and trees to promote water conservation and shall be buried below the rock or bark mulch. All lawns will require spray irrigation systems, with automatic valves and controllers. Irrigation design shall be submitted with final construction plans for review by the ARC. All disturbed native vegetation areas shall have a temporary irrigation system sufficient to reestablish vegetation.

Certain areas of TRI Center shall be designed to use nonpotable water irrigation (sewer plant effluent). In those areas, a separate water distribution system (purple pipes, valves, meters) must be installed in compliance with Company Rules and state standards.

Plant Material List - Trees Deciduous and Evergreen Trees						
Common Name	Botanical Name	Deer Resistant	Drought Tolerant	Revegetation	Erosion Control	Remarks
Deciduous Trees						
Sugar Maple	Acer saccharum		X			
Amur Maple	Acer ginnala		X	X		Good fall color
Amur Chokecherry	Prunus maacki		X		X	Good fall color
Fremont Cottonwood	Populus fremontil					Very fast growth
Globe Willow	Salix matsudana				X	
Aspen	Populus tremuloides			X		Sierra native
Hackberry	Celtis occidentalis		X			Good shade tree
London Plane	Platanus acerfolia		X		X	Large shade tree
Idaho Locust	Robina ambigua 'Idahoensis'		X	X		Showy flowers
Goldenrain Tree	Koelreuteria paniculata		X	X		Laterns interesting
Russian Olive	Elaeagnus angustifolia		X			Grey green foliage
Western Catalpa	Catalpa speciosa					
Newport Flowering	Prunus cerasifera 'Newport'		X			
California White Oak	Quercus lobata	X	X	X		Large shade tree
Bur Oak	Quercus macrocarpa		X			
Red Oak	Quercus rubra		X	X		
Blue Ash	Fraxinus quadrangulata	X	X			
Columnar English Oak	Quercus robur 'Columnaris'					Dark green leaves

Plant Material List - Trees Deciduous and Evergreen Trees						
Common Name	Botanical Name	Deer Resistant	Drought Tolerant	Revegetation	Erosion Control	Remarks
Evergreen Trees						
Jeffrey Pine	Pinus jeffreyi	X	X			Sierra native
Ponderosa Pine	Pinus ponderosa	X	X	X		
Lodgepole Pine	Pinus contorta	X	X			
Rocky Mountain Juniper	Juniperus scopulorum	X	X			Interesting berries
Arizona Cypress	Cupressus arizonica	X	X			
Austrian Black Pine	Pinus nigra			X		Fast growth
Pinon Pine	Pinus edulis	X	X			
Rocky Mountain	Juniperus scopulorum	X	X			
Scotch Pine	Pinus sylvestris	X	X			
Singleleaf Pinon Pine	Pinus monophylla	X	X	X		Nevada state tree
White Fir	Abies concolor	X		X		Sierra native
Giant Sequoia	Sequoiadendron gigantea	X	X			Sierra native
Colorado Blue Spruce	Picea pungens glauca	X				Blue color

Plant Material List - Shrubs Deciduous and Evergreen Shrubs						
Common Name	Botanical Name	Deer Resistant	Drought Tolerant	Revegetation	Erosion Control	Remarks
Deciduous Shrubs						
Cinquefoil	Potentilla fruiticosa	X	X		X	
Alpine Current	Ribes alpinum	X				Berries attract birds
Golden Current	Ribes Aureum	X	X	X	X	Berries attract birds
Siberian Peashrub	Caragana arborescens		X		X	
Redosier Dogwood	Cornus Stolonifera			X	X	Streambank vegetation
Staghorn Sumac	Rhus Typhina		X		X	Good bank cover
Tamarix	Tamarix parvifolia		X	X	X	Spring flowers
Snowberry	Symphoricarpos albus		X		X	
Amur Maple (tough)	Acer ginnala				X	Good fall color
Buffaloberry	Shepherdia argentea		X		X	
Rose varieties	Rosa spp.		X	X	X	Good bank cover
Smoke Tree	Cotinus coggygria	X	X		X	Interesting flowers
Tartarian Honeysuckle	Lonicera tatarica		X	X	X	
Western Chokecherry	Prunus virginiana var.					Berries attract birds
Western Sand Cherry	Prunus besseyi		X			Berries attract birds
Sweet Mockorange	Philadelphus coronarius		X			Fragrant
Nanking Cherry	Prunus tomentosa		X	X	X	
Smooth Sumac	Rhus glabra		X	X	X	Good bank cover
Squawbush Sumac	Rhus trilobata		X			
Spiraea	Spiraea spp.		some var.	X		

Plant Material List - Shrubs Deciduous and Evergreen Shrubs						
Common Name	Botanical Name	Deer Resistant	Drought Tolerant	Revegetation	Erosion Control	Remarks
Potentilla	Potentilla fruiticosa var.	X	X	X		
Forsythia	Forsythia intemedia					
Common Lilac	Syrginia vulgaris		some var.			
Mentor Barberry	Berberis x mentorensis	X	X		X	
Peking Cotoneaster	Cotoneaster acutifollius	X	X		X	
Evergreen Shrubs						
Big Sagebrush	Artemesia tridentata		X	X	X	
Bitterbrush	Pershia tridentata		X	X	X	Sierra native
Seagreen Juniper	Juniperus chinensis Mint	X	X			Sierra native
Fourwing Saltbrush	Atriplex canescens		X	X		
Greenleaf Manzanita	Arctostaphylos patula	X	X	X		Sierra native
Scotch Broom	Cytisus scoparius	X				Sierra native
Mountain Mahogany	Cercocarpus ledifolius		X	X	X	
Chinese Juniper	Juniperus chinensis	X	X	X		For dry sites
Horizontal Juniper	Juniperus horizontalis	X	X		X	
Oregon Grapeholly	Mahonia aquifolium	X				
Mugo Pine	Pinus mugo	X				Medicinal berries

Plant Material List - Ground Cover Ground Cover Plantings and Grasses						
Common Name	Botanical Name	Deer Resistant	Drought Tolerant	Revegetation	Erosion Control	Remarks
Ground Cover Plantings						
Bearberry	arctostaphylos uva-ursi	X	X	X	X	Makes a green carpet
Lavender Cotton	Santolina chamaccyparissus	X	X			Showy flowers
Winter Creeper	Euonymus fortunei					
Snow in Summer	Cerasteum tomentosum	X	X		X	Invasive
Periwinkle	Vinca major				X	Invasive
Brooms	Genista spp.	X	X		X	
Hall's Japanese Honeysuckle	Lonicera japonica				X	Fragrant flowers
Potentilla	Potentilla verna					
Virginia Creeper	Parthenocissus quinquefolia				X	Good fall color invasive
Wolly Yarrow	Achillea tomentosa		X			
Grasses and Erosion Control						
Fairway Crested	Agropyron cristatum				X	
Siberian Wheatgrass	Agropyron sibericum				X	
Western Wheatgrass	Agropyron smithii				X	
Thickspike Wheatgrass	Agropyron dasystachyum				X	
'Covar' Sheep Fescue	Festuca ovina 'Covar'				X	
Tall Wheatgrass	Agropyron elongatum				X	
Indian Ricegrass	Aryzopsis hymenoides				X	

Plant Material List - Ground Cover Ground Cover Plantings and Grasses						
Common Name	Botanical Name	Deer Resistant	Drought Tolerant	Revegetation	Erosion Control	Remarks
Sand Dropseed	Sporobolus cryptandrus				X	
Alkali Sacaton	Sporobolus airoides				X	

Herbaceous Flowering Perennials						
Wooly Yarrow	Achillea tomentosa	X	X	X	X	
Saltbush	Atriplex garderi Gardner's		X	X	X	
Creeping Australian	Atriplex semibaccata		X	X	X	
Snow in Summer	Cerasteum tomentosum		X		X	
Common Winter Creeper	Euonymus fortunei var.	X				
Spring Cinquefoil	Potentilla verna	X			X	
Green Lavender Cotton	Santolina virens				X	
Lavender Cotton	Santolina chamaccyparissus				X	
Periwinkle	Vinca major	X				
Bearberry	Arctostaphylos uva-ursi	X	X	X	X	
English Ivy	Hedera helix	X				
Aaron's Beard	Hypericum calysinum	X	X			
Squaw Carpet	Ceonothus prostratus		X		X	

Section 5. Screening And Fencing.

Subsection 5.1 Screening Between Incompatible Land Uses. Landscaping or other screening acceptable to the ARC shall be provided between commercial or office developments and industrial uses. The use of landscape berms is encouraged for screening.

Subsection 5.2 Fence Materials. Fence materials shall be durable, and shall only be allowed in areas approved by the ARC. No fencing may be installed within or in front of the landscape frontage area. Wood fencing materials are strongly discouraged due to maintenance-related problems.

Section 6. Lighting And Signage.

Subsection 6.1 Site Lighting. Site lighting shall be sufficient to safely move employees and visitors from their cars to building entries. Parking area light locations on private parcels require coordination with roadway lighting (if any). Parking areas and pedestrian walks on all sites require pole-mounted down lights for the best light distribution, with simple rectangular "shoe box" style light fixtures. Building entries and smaller scale walks are encouraged to be lit with bollards and up lights in landscaping. Building facade lighting is encouraged at main entries and offices, with minimum light spillage outside of the parcel.

Subsection 6.2 Light Source Hardware. Exterior lighting may include fluorescent and metal halid, mercury vapor, and high pressure sodium type High Intensity Discharge (H.I.D.) light fixtures.

Subsection 6.3 Lighting Controls. The ARC encourages the application of electronic ballasts and dimming ballasts for H.I.D. and fluorescent sources. All exterior light fixtures for functional lighting shall operate on a photocell switch operating on a dusk to dawn basis. All fixtures providing no functional light levels shall operate on a dusk to not later than midnight basis with a timer/photocell switch.

Subsection 6.4 Signage-Parcel Identification. No reader board or electronic message boards will be allowed. Architectural finish materials and colors used for buildings on the site should be incorporated into all parcel signage. A sign location plan and elevations for each site will be reviewed and approved by the ARC. Free standing signs will be allowed at primary drive aisles at a maximum of two per site. The sign panel maximum size is 8' high and 10' long. Material can be either metal or concrete, with illumination optional. Monument signs are preferred, but pole or pylon signs of low height may be allowed in locations where traffic sight lines are not impaired.

Subsection 6.5 Signage-Office Occupants. Primary occupant identification shall be located above the main building entry, with address per fire code requirements. Fabricated individual aluminum channel letters are preferred. Lettering height for occupants is 36" maximum for single story buildings and 42" maximum for multiple story buildings. Signage illumination is optional. For secondary occupant sign identification a fascia mounted sign or storefront glass signage is required. Maximum fascia mounted sign height is 18" and storefront sign height 6". Secondary occupants sharing a common entry may also be listed on an exterior building directory. Directory panels shall

be aluminum or fiberglass, height 5' - 6' maximum and 4' - 6' maximum width, with internal illumination.

Subsection 6.6 Signage-Temporary Signs. Temporary signs and banners (e.g., "For Sale", "For Lease", "Coming Soon", etc.) are allowed only by approval of the ARC. Contractor signs during construction are also allowed with ARC approval.

Subsection 6.7 Lighting and Signs Not Allowed. No roof signs or painted signs on building facades are allowed. No paintings or murals on buildings are allowed. No billboards or other freestanding signs are allowed unless described in this Subsection. Flashing lights on signage or otherwise are not allowed. Exposed neon lights are discouraged. No signs, other than a TRI Center project sign, which is meant to be seen by motorists on the I-80 freeway, will be allowed. All signs of any kind require ARC approval.

Section 7. Slope Stabilization - for Slopes Steeper than 3:1

Subsection 7.1 Design Requirements.

1. Mechanical Slope Stabilization

   When rock rip-rap is used for slope stabilization, it shall contain a minimum of four fractured faces and be placed to a minimum depth of 12 inches. A minimum of 75% of the rip-rap shall be 8 inch diameter rock or greater.

2. Planted Slope Stabilization shall be allowed to occur naturally.

PREPARATION:

After slopes have been compacted, the top 3" of soil shall be roughened.

PLANTING:

Planting requirements shall be specified by the ARC.

Section 8. Parking and Loading.

Subsection 8.1 New Uses/Remodels. Permanently maintained off-street parking facilities shall be provided in accordance with the provisions of this article. When existing buildings are enlarged, off-street parking and loading facilities shall be provided in accordance with the provisions of this article for the enlargement. When approving an improvement plan transforming one permitted use to another permitted use (e.g., renovation to increase office space in a warehouse), additional parking in accordance with this article may be required when the ARC determines that the new use would result in a substantial increase in parking demand which exceeds existing parking supply.

Subsection 8.2 All Parking On Site. Unless otherwise specified, all required off-street parking shall be located on the building site. No street or off-site areas shall be taken into consideration in determining compliance with site parking requirements.

Subsection 8.3 Driveways. Unobstructed access to a street right-of-way shall be provided, intersecting the right-of-way at an angle of approximately ninety (90) degrees. All driveways must be paved. Except for variations approved by the ARC, driveway approaches shall be a minimum of 14 feet in width for one-way traffic and 24 feet in width for two-way traffic. Two-way access lanes shall be a minimum of twenty (20) feet in width; one-way access lanes shall be a minimum of fourteen (14) feet in width or as approved by fire officials. No parking area shall be designed to require or encourage a vehicle to back over the property line into the street right-of-way.

Subsection 8.4 Parking Space Requirements. Automobile off-street parking spaces shall be a minimum of eight and one-half (8 1/2) feet wide by twenty (20) feet long, or nine (9) feet wide by nineteen (19) feet long. Thirty-five percent (35%) of the required spaces may be designed for compact vehicles eight (8) feet wide and fifteen (15) feet long. Layout shall conform to the attached "Parking Layout Plan". Adequate ingress, egress, on-premises circulation and maneuvering areas shall be provided. A two (2) foot vehicle overhang may be permitted where parking abuts a sidewalk with a minimum width of six (6) feet. Wheel stops or other measures approved by the ARC shall be provided eighteen (18) inches from landscaped areas.

Subsection 8.5 Handicapped Parking. All parking areas shall have a minimum of one (1) handicapped parking space. This space shall be thirteen (13) feet wide, clearly identified with signs as described in the handicapped parking sections of NRS 484, with a painted symbol and located within 100 feet of the building entrance. The number of handicapped spaces shall be provided at a minimum in accordance with the following table, unless federal, state or local law require additional spaces:

Total Parking Required	Required Minimum Number of Accessible Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 and over	10 plus 1 for each 100 over 1000

Subsection 8.6 Surfacing. All off-street parking areas shall be surfaced with a minimum of two (2) inches of asphaltic concrete compacted to ninety-five percent (95%) maximum density as determined by ASTM D 1074. Said asphaltic concrete shall be placed over six (6) inches of crushed aggregate base compacted to ninety-five percent (95%) maximum density as determined by Nev. T-101. Temporary parking, or construction vehicle and construction worker parking in association with a construction project, is exempt.

Subsection 8.7 Conflicts. Whenever the requirements of this article and the landscaping requirements are in conflict, this article will prevail with the exception of the requirement for landscaping adjacent to public rights-of-way.

Subsection 8.8 Curbing. Portland cement concrete curbing shall be provided if necessary to prevent free roll onto public rights-of-way, overhang beyond property lines, and encroachment into landscaped areas.

Subsection 8.9 Security Lighting. All parking areas with more than ten (10) spaces shall be lighted for security.

Subsection 8.10 Striping and Marking. Off-street parking areas shall be striped or otherwise marked so that individual spaces and driving lanes are clearly indicated. Directional markers shall be painted on the driveway surface or placed on standards as required by the ARC.

Subsection 8.11 Screening Adjacent To Arterial Or Collector Streets. Parking areas adjacent to arterial or collector streets shall be screened by either a landscaped berm or a masonry wall of three (3) feet in height located at the perimeter of the parking area. Berms are preferred.

Subsection 8.12 Circulation. Interior circulation in parking lots shall be designed such that stacking on arterial or collector streets does not occur as the result of vehicular movements into or out of such parking lots.

Subsection 8.13 Loading. Off-street loading areas shall be provided for all non-residential developments of 30,000 square feet or more in gross floor area. Each off-street loading area shall consist of at least one space, ten (10) feet by forty-five (45) feet, with a fourteen (14) foot height clearance for each 30,000 square feet of gross floor area. Such off-street loading areas shall not conflict with pedestrian or vehicular circulation.

Subsection 8.14 No Reduction. An owner or occupant of a building or land use shall not cause or permit the discontinuance or reduction of required parking or loading facilities without the establishment of acceptable alternative parking or loading facilities which meet the requirements of this article and are approved by the ARC.

Subsection 8.15 Off-Street Parking Requirements.

(1) General retail, commercial wholesale and services -- 1 per 200 square feet of gross floor area.

(2) Offices:

- (a) Professional -- 1 per each 250 square feet of gross floor area.
- (b) Medical professional -- 1 per employee and 6 per physician in attendance during operating hours.

(3) Food and beverage service:

- (a) Low-volume sit-down restaurant (customer turnover typically hourly or longer) -- 1 per each 3 seats plus one per employee on largest shift.
- (b) Lounge area -- 1 per each 100 square feet
- (c) High-volume restaurant (customer turnover typically less than hourly) -- 13 per 1,000 square feet plus 1 per employee on largest shift.

(4) Hospitals -- 1.25 per each bed.

(5) Bowling alleys -- 4 per lane.

(6) Financial institutions -- 1 per 250 square feet gross floor area.

(7) Motels -- 1 per room and 1 per employee.

(8) Hotels -- .8 per room plus parking as required for other uses in hotel, and 1 per employee.

(9) Theaters -- 1 per each 3 seats.

(10) Child care facility -- 1 per employee plus 1 space of drop-off area per 10 children.

(11) Churches -- 1 per each 5 seats.

(12) Manufacturing, industrial, warehousing, assembly -- 1 space per employee for the largest shift and 5 spaces for visitor parking.

(13) Casino -- 1 per 500 square feet of gaming and commercial area.

(14) Drive-through facilities -- 40 lineal feet of stacking area in front of each window or bay plus one off-street stacking area of 140 lineal feet in length (measured from the window).

Areas adjacent to gas pumps shall not be considered as required parking. Demands and requirements not clearly indicated herein shall be determined by the ARC, based on the particular use and its particular off-street parking demands.

PARKING LOT STANDARDS

Standard: Option I: 8.5' x 20' stall

A	B	C	D	D'	E	F	F'	G
45°	8.5	20.0	12.0	24.0	12.0	52.0	64.0	11.0
60°	8.5	21.5	17.0	24.0	9.8	60.0	67.0	8.5
90°	8.5*	20.0	24.0	24.0	8.5*	64.0	64.0	0

*8.3' wide spaces for 90° parking may be approved by the ARC.

Standard: Option II: 9.0' x 19' stall

A	B	C	D	D'	E	F	F'	G
45°	9.0	19.8	12.0	24.0	12.7	51.6	63.6	10.5
60°	9.0	21.0	16.0	24.0	10.4	58.0	66.0	8.5
90°	9.0	19.0	24.0	24.0	9.0	62.0	62.0	0

B Stall Width
C Stall to Curb
D Aisle Width - One Way
D' Aisle Width - Two Way
E Curb Length per Car
F Curb to Curb
F' Curb to Curb with Two Way Aisle
G Initial Backup Distance

ARTICLE VII
STREETS AND SIDEWALK DESIGN STANDARDS

Section 1. **General**.

1. Unless otherwise specified by the Standard Specifications and Details for Public Works Construction or items in this article, design of all streets and related improvements shall conform to the following: "GUIDELINES FOR URBAN MAJOR STREET DESIGN," published by the Institute of Transportation Engineers; and AASHTO "A Policy on Geometric Designs of Highways and Streets", latest editions. The less restrictive standard shall prevail for design.

2. All public streets shall be improved and conform to TRI Center Standards. Additional right-of-way shall be provided near intersections as required by the TRI Center Engineer and the county in order to facilitate turning movements.

3. At least two means of ingress and egress pursuant to TRI Center Standards shall be provided to serve a Development unless otherwise approved by the TRI Center Engineer with concurrence by the Fire Chief. When two means of access are required, one may be constructed to emergency access standards (i.e., gravel on firm ground).

4. Streets or access adjacent to or necessary to serve a Development which are not within the boundaries of the Development shall be improved concurrently with Development to standards required by the TRI Center Engineer.

5. Half streets may be permitted along property lines if they are in accordance with an adopted street pattern and have been approved by the TRI Center Engineer.

6. Street design shall conform to standard details and be based on the design subgrade resilience modulus shown in the soils report prepared by an Engineer, submitted with the improvement drawings. All soils report recommendations shall be referenced on the plans.

Section 2. **Design Requirements**.

1. All streets shall have a minimum grade of 0.4%. Collector, arterial and expressway streets shall have a maximum grade of 12.0% (6.0% preferred).

   a) Grades in excess of 8.0% shall be limited to a horizontal tangent length of 400 feet. Grades in excess of 10.0% shall be limited to a horizontal tangent length of 200 feet. Grades in excess of 8.0% shall be provided with landings on both sides of the steeper section of grade 6.0% or less, 100 feet in length.

   b) On long grades, the steeper grades shall be provided near the bottom of the ascent wherever possible, with shallower grades near the top of the ascent.

c) Street intersections shall not be allowed when the grade on the primary street exceeds 8.0% on streets with a northern exposure and 10.0% on streets with a southern exposure.

d) Sharp horizontal curvature shall not be designed at or near the top of a pronounced crest vertical curve or near the bottom of a pronounced sag vertical curve.

2. Street grades on the minor legs of intersections shall not exceed 4% for a minimum distance of 50 feet measured from the extension of the face of curb of the primary street through the intersection (improved to full TRI Center Standards). Additional criteria is as follows:

a) Street intersections of two local streets in a stop condition do not require a vertical curve at the intersection of the crown section with the street grade.

b) Other street intersections shall require a vertical transition at the intersection of the crown section with the street grade.

Note: A local street is defined as having a maximum average daily traffic volume of 1,000 trips.

3. Street Crown - The normal street crown is 2.0% from the centerline to the lip of gutter, with a minimum of 1.0% and a maximum of 4% when approved by the TRI Center Engineer. Unless approved otherwise, the crown shall be at the centerline of the traveled way.

4. Vertical curves shall be provided wherever the algebraic difference between two intersecting grades is 2% or more, excluding intersections. Such curves shall be of sufficient length to provide the minimum sight and stopping distances as established by the American Association of State Highway and Transportation Officials (AASHTO), for minimum design speeds of 30 MPH for local and collector streets, 40 MPH for minor arterial streets and 50 MPH for major arterial and expressway streets.

5. Horizontal curve radii shall be determined using design speeds of 30 MPH for local and collector streets, 40 MPH for minor arterial streets and 50 MPH for major arterial and expressway streets. All collector, arterial and expressway streets shall be designed using current AASHTO design criteria for "High-Speed Urban Streets". Local streets may be designed using current AASHTO design criteria for "Low-Speed Urban Streets".

DESIGN SPEED	*f* (friction factor)		
V (mph)	Low-Speed Urban Street Design	High-Speed Urban Street Design	Minimum Stopping Sight Distance
20	0.30		150
25	0.25		150
30	0.22	0.16	200
40		0.15	325
50		0.14	475

The minimum design radius shall be determined using the following formula:

$$\text{where, Rmin} = \frac{V2}{15\ (etf)}$$

R - Centerline radius of roadway.

e - Superelevation rate, decimal (For a normal crown section, e is assumed negative for adverse side). Superelevation may be required by the TRI Center Engineer on higher speed streets. Maximum allowable superelevation shall be percent.

f - Friction factor from above table.

6. Curves on any street, except local streets, shall be separated by a tangent of not less than one hundred 100 feet.

7. Median openings on arterial streets that have continuous raised center medians will not normally be permitted unless all the following conditions exist:

   a. The property to be served is a major traffic generator and has a minimum continuous frontage of 600 feet along the major street or, access easements are recorded to allow use of the opening by a minimum of two properties which combined generate sufficient traffic to warrant the opening.

   b. The median opening is not less than 700 feet from an intersection with an arterial street.

   c. The median opening is not less than 400 feet from an intersection with a collector or local street.

d. The median opening is not less than 600 feet from any other existing or planned midblock median opening.

e. Sight distance is adequate for the design speed of the major street.

f. The design of median openings shall be subject to the requirements and approval of the TRI Center Traffic Engineer including storage lengths and tapers to AASHTO requirements.

8. Any street or highway intersecting any other street or highway shall intersect at an angle as near to a right angle as is practicable, but in no event shall an intersection be allowed at an angle of less than 60 degrees unless approved otherwise by the TRI Center Engineer.

9. Dead end streets exceeding 350 feet in length, when measured from the roadway right-of-way to the end of the street, shall be provided with a cul-de-sac.

10. Design of the structural section for Asphalt Concrete Pavement shall conform to the procedures as set forth in the current Asphalt Institute Manual Series No. 1 (MS-l), based on subgrade strength values determined by Resilient Modulus (MR) Value, Resistance (R) value or California Bearing Ratio (CBR). Sufficient tests shall be made to evaluate fully each different soil type in the project. Asphalt Concrete Pavement mix shall be Type 2 unless otherwise approved by the TRI Center Engineer. Hydrated lime (mineral filler) shall be added to all plantmix bituminous aggregates at one and one-half percent of the weight of the dry aggregates, unless otherwise approved by the TRI Center Engineer. The minimum design life of the structural section shall be 20 years. In no case shall the structural section for asphalt concrete pavement for streets be less than 4 inches of pavement over 6" of type 2 class B aggregate base. All streets, both public and private, which are to be utilized by construction vehicles during development shall be designed to carry the maximum anticipated loads.

11. Fog Seal: Within a period of not more than 20 days after the asphalt concrete pavement has been placed, a seal coat (Fog Seal) of emulsified asphalt Type SS-lh diluted with an equal amount of water shall be applied at the rate of 0.08 to 0.10 gallons per square yard. Fog seal shall not be placed when the temperature is below 50 degrees Fahrenheit or when weather conditions in the opinion of the Engineer, would prevent proper construction.

12. Cul-de-sacs & Knuckles - Minimum grades around Cul-de-sacs and Knuckle-type intersections shall be 0.5%. The normal street crown with such a development may be increased to a maximum of 4.0% from the centerline to the lip of gutter. Knuckle turnouts are not allowed on through streets without prior approval by the TRI Center Engineer.

13. Cul-de-sacs - Cul-de-sacs shall not exceed 800 feet in length when measured from the roadway right-of-way to the radius point of the bulb turnaround, unless provided with an emergency access to TRI Center Standards. The minimum turnaround radius of the bulb shall be 40 feet measured from the radius point to face of curb. Minimum right-of-way for the bulb shall be 45 feet measured from the radius point to the right-of-way line.

14. Temporary cul-de-sacs shall be constructed with a minimum of 2 and 1/2 inches asphalt concrete pavement on an engineered base when located within a Development. When located within an adjacent future developable area it shall conform to temporary emergency access road standards within an access easement. All temporary cul-de-sacs shall be a minimum 40 foot radius.

15. Emergency Access Roads - Roadways are to be a minimum width of 15 feet all weather, with a minimum outside turning radius of 40 feet, unless otherwise approved by the Fire Chief. Grades shall not exceed the maximum for street grades unless otherwise approved by the Fire Chief and the TRI Center Traffic Engineer. Temporary emergency access roads shall be surfaced with a minimum of 2 and 1/2 inches of Type 2, Class B Aggregate Base.

16. Temporary Patches: Temporary patches on public streets are to be a minimum of 2" thick and compacted, and shall not deviate more than 3/4 inch above the existing pavement grade when measured from the bottom of a straight edge laid two feet beyond the patch on both sides of the existing pavement. In no case shall the elevation of the patch be lower than the existing adjacent pavement elevation. All loose material shall be removed from the temporary patch site immediately after completion of the patch.

17. Retaining Walls: Unless using standard details, all retaining walls constructed within street right-of-ways and those which are to be maintained by the Association shall have a complete set of design calculations submitted with the improvement plans for review. All calculations shall be signed and sealed by a Nevada Registered Civil Engineer.

18. Street signs to TRI Center Standards shall be installed at all intersections. Signage and pavement markings shall be installed on all public streets and bikeways either newly constructed or improved with Development, as required by the TRI Center Engineer. Design speeds on TRI Center streets shall be 25 MPH on local and collector streets, 35 MPH on minor arterial streets and 45 MPH on major arterial streets, unless designated otherwise by the TRI Center Engineer. Proposed signage layouts shall be submitted with public improvement plans. Signs and pavement markings shall be in conformity with the most recent addition of the manual on uniform traffic control devices (MUTCD), published by the Federal Highway Administration.

Section 3. **Curb and Gutters, Driveway Approaches, Curb-Cuts, Alleys and Bikeways.**

1. Curbs and gutters are to be constructed of Portland Cement Concrete unless approved otherwise by the TRI Center Engineer.

2. At each right angle street intersection, the property line at each block corner shall be rounded with a curve having a radius of not less than 15 feet on local streets, 20 feet on collector streets, 23 feet on minor arterial streets and 33 feet on major arterial and expressway streets. Where streets intersect at angles of less than right angles or where other peculiar conditions of intersection occur, the TRI Center Engineer may require a different radius.

3. Curb returns shall have minimum face of curb radii of 30 feet on local streets, 35 feet on collector streets, 40 feet on minor arterial streets and 50 feet on major arterial and expressway streets.

4. Driveways: Spacing from center to center shall be a minimum of 235 feet on major arterials, 150 feet on collectors and 50 feet on interior or locals.

5. No obstruction (e.g., power poles, street lights, signal poles and controls, water meter boxes, pull boxes, mail boxes) shall be allowed to be located within public sidewalks or pedestrian ways, except as may be allowed by the TRI Center Engineer where obstructions exist within existing improvements. Any necessary additional right-of-way that may be required for locating such facilities at the back of sidewalks shall be dedicated or easements provided.

6. Cut and fill slopes are to be set back a minimum of 1 foot from the back of the sidewalk. If no sidewalk exists the setback shall be a minimum of 5 feet from back of curb.

7. Where car storage or access for motor vehicles is desired, provision shall be made for a driveway. All driveway approaches shall enter properties via a standard curb-cut.

ARTICLE VIII
STORM DRAINAGE

Section 1. **General**.

1. With the following applications, all projects greater than 25 acres shall submit for approval, unless waived by the TRI Center Engineer, a drainage report signed and stamped by a Nevada Registered Civil Engineer in accordance with TRI Center Standards. The project shall be designed to utilize above ground transportation of storm water whenever possible. It is the intent of this project to use non-engineered systems to minimize the impacts to the environment that traditional systems cause.

2. Whenever a drainage report indicates that the 5 year storm runoff from a Development cannot be handled by the existing storm drain system, the developer shall upgrade the existing system to accommodate the runoff; or provide on-site detention and controls for acceptable disbursement into the system: or provide an on-site retention-infiltration system verified by an Engineer to be adequate to accommodate the increase in runoff. The operation and maintenance of all on-site drainage systems is the responsibility of the Owner.

3. Discharge of storm drain waters into an off-site drainage facility or natural watercourse shall not be a contributing factor to increasing the peak flow of storm drainage runoff in said drainage facility above that which exists at present; or an Engineer must provide to the TRI Center Engineer conclusive proof in the Drainage Report that any increase in peak flow will not adversely affect or cause damage to any property along said drainage facility or watercourse now or in the future, based on existing zoning.

4. Development of property shall not adversely affect any natural drainage facility or natural watercourse.

5. All drainage relating to a Development shall be collected on site by facilities to accommodate the storm drain waters for the 5 year return frequency storm flow, both entering the site and generated onsite and piped in accordance with TRI Center Standards to an existing adequate storm drain system, major drainage facility or natural watercourse. Where by reason of terrain or other circumstances, the TRI Center Engineer determines that piping storm drain waters is inappropriate or unnecessary, alternative methods of transporting such waters may be approved in lieu of piping. Storm drain waters generated within the boundaries of a Development which discharge onto and across other private property require that a permanent easement for access and maintenance be granted from the Development boundary to the point of discharge into an existing public storm drain system, major drainage facility or natural watercourse. Improvements complying with TRI Center Standards will be required to assure access and proper maintenance within said easement.

Section 2. Drainage Report.

The following criteria shall be considered for a required Drainage Report.

STANDARDS FOR DRAINAGE REPORT (Public and Private) - The report is required to identify problems and present solutions with engineering documentation. Tabularized data on maps is preferred to lengthy written descriptions except for unusual items such as detention, HEC items, etc.

1. Title Page
   a. Project Name
   b. Preparer's Name, Firm, Date
   c. Engineer's Seal of Preparer and Signature

2. Introduction
   a. Site Location
      1) Street Location, Assessor's Parcel Number(s), and Section Reference
      2) Adjacent Developments
   b. Site Description
      1) Topography, Ground Cover, etc.
      2) Existing drainage facilities, major drainage facilities, flood hazard areas, irrigation ditches, other site conditions that must be considered.
   c. Proposed Project Description
   d. Other previous studies relevant to site.

3. Historic Drainage System (discuss the following)
   a. Major Basins
      1) Relationship to major drainage facilities
      2) Major basin drainage characteristics (topography, runoff, cover, use, erosion, etc.)
   b. Sub-basin and Site Drainage (1 and 2 may be tabulated on map)
      1) Minor (5 yr) and Major (100 yr) storm flows for each sub-basin affecting the site.
      2) Existing drainage patterns: channelized or overland flow, point of discharge, etc.
      3) Effect of historic flows on adjacent properties.

4. Proposed (Developed) Drainage System (discuss each of the following)
   a. Criteria
      1) Size of major basins and tributary sub-basins
      2) Hydrologic method to be used for analysis (Rational or SCS.)
      3) Design Storm Intensities (Minor 5 yr, Major 100 yr)
   b. Runoff
      1) Historic storm flow rates and paths
      2) Developed storm flow rates and paths for minor and major storms
   c. Piping

1) Design the storm drain system to pass the five year storm including all downstream improvements
2) Verify storm flows from inlets to ultimate outlets of the drainage system

d. Detention unless provided for with a master system(5 to 100 year storm(s) depending on conditions) (Required for any and all storms based on limiting conditions downstream. For example, if the piped system cannot pass the 5 year, the 5 year shall be detained; in addition, if the overland flow or channels cannot pass storms exceeding the 5 year (up to the 100 year) detention for all storms exceeding that capacity Center shall be provided)
1) Volume required and provided for zero increase in peak flows
2) Release rates and method
3) Passage of storms exceeding the 5 year up to the 100 year
4) Provide for an emergency overflow which will not cause a direct impact to neighboring sites
5) Engineer to provide detailed description of downstream constraints (or none) and design calculations on how to mitigate the problem
6) Need for detention shall be clearly identified in the preliminary or schematic plan and the necessary area shall be identified on preliminary plans

e. Streets (May be shown on plans)
1) Depth and velocity of flow for major and minor storms
2) Drainage system

f. Open Channel Flow (may be shown on plans)
1) Type
2) Depth and velocity Center

g. Storm Drains and Culverts (show all data on plans)

5. Conclusions: Discuss impact of improvements
a. Benefits
b. Adverse effects with solution to mitigate impact to them.

6. Appendixes
a. Hydrologic and Hydraulic Computations
1) Historic Runoff
a) Off site
b) Onsite
2) Developed Runoff
a) Off site
b) Onsite
3) Detention for up to the 100-year storm
4) Hydraulic Computations

b. Drainage Plan
1) Site Location Map. On a U.S.G.S. map or larger as appropriate show relation of site to major drainage basin and sub-basin. Show flood hazard areas if applicable and of f-site flows through project.

a) Both location plan (overall drainage) and subdrainage plan shall be signed and sealed by an Engineer and shall be included in the construction plans for the subdivision/development. Tables detailing design data of rational formula and inlet and pipe and channel design to be shown on plan.

b) On grading plans show peak flows for 5 and 100 year storms at inlets and other sub-basin points of concentration and at discharge points and in channels. Show peak flows entering and leaving the site, trace path leaving site to nearest major drainage facility without adverse impact to downstream owners.

3) Benchmarks - to be shown on plans with description and elevation
4) Existing and proposed property lines
5) Existing and proposed drainage easements
6) Street names, grades, and widths
7) Routing and accumulative flows at the upstream and downstream ends of the site and at various critical points onsite for both minor and major runoff. Inflow and out flow for both storms for all subbasins.
8) Street cross sections showing 100 yr. flood levels
9) Existing and proposed major drainage facilities
10) Open channel flow in major channels shall be provided with the following information on plans:
11) Storm Sewers (Show on plans)
   a) Location and size of all existing and proposed structures
   b) Proposed materials
   c) Pertinent elevations and slopes

Section 3. **<u>Design Requirements (Public and Private)</u>**.

1. Mannings Formula is to be used in computing capacities of all open channels and closed conduits with the following minimum values for roughness coefficient "n":

PVC or ABS	0.014
Concrete Pipe	0.014
Corrugated Metal Pipe (100% paved)	0.015
Corrugated Metal Pipe (paved invert)	0.019
Corrugated Metal (plain)	0.024
Open channels with gunite lining	0.019
Open channels with paved bottom	0.025
Earth channels (no rock or gravel)	0.030

Rock or gravel per approved Engineers Manual based on size and placement of materials.

2. The Rational Method may be used in computations for the rate of runoff for urban and small watersheds 500 acres or less. The SCS method, SCS TR-55 "Urban Hydrology for Small Watersheds", may be used for larger watersheds.

3. The Rational Method

a. The design flow for the Rational Method is expressed as:

$Q = CiA,$

where:

Q = peak rate of runoff, cubic feet per second

C = runoff coefficient

i = average rainfall intensity, inches per hour

A = watershed area, acres

b. The following listed runoff coefficients, depending on future use, shall be used:

RUNOFF COEFFICIENTS "C"

Land Use Type	Runoff Coefficient "C"
Rural	0.25-0.35
Neighborhood Commercial	0.85
Community Commercial	0.85
Tourist Commercial	0.85
Office	0.85
Manufacturing	0.85-0.90
Distribution and Warehousing	0.85-0.90
Public Facility	0.50-0.85
Pavement and Concrete Surfaces	0.90-0.95
Park	0.25
Open Space (0-5% grade - vegetated)	0.20-0.30
Open Space (0-5% grade - no vegetation)	0.30-0.40
Open Space (5-15% grade - vegetated or unvegetated)	0.40-0.50
Open Space	(Over 15% grade - 0.40-0.60 sparsely vegetated, rock or clay soils)

c. The rainfall intensity curve shall be used for determining the average intensity. The time of concentration, with a minimum build up time of 10 minutes is expressed as:

$$tc1 = 10 \text{ or } \frac{L}{v \times 60} \text{ whichever is greater}$$

where:

tc1	=	time of concentration at initial inlet, minutes
L	=	length from uppermost point of watershed inlet, feet
v	=	channel or overland velocity, feet per second

Given the time of concentration at a design point, the time of concentration at the next design point is determined by adding travel time, expressed as:

$$t = \frac{L}{v \times 60}$$

where:

t	=	travel time, minutes
L	=	length of channel or conduit between design Points, feet
V	=	channel or conduit velocity, feet per second

4. Minimum design velocity shall be 2 feet per second for closed conduits.

5. Overland flow is to be provided for and channelized to TRI Center Standards within dedicated easements or public right-of-way to protect structures from flood during periods of rainfall-intensity storms that exceed the 5 year storm, up to and including the 100 year return frequency storm.

6. Easements with improved vehicular access in accordance with TRI Center Standards shall be provided to publicly owned storm drain manholes, storm drain inlets and outlets and to associated structures not located within an improved street section.

7. Easements for access to and maintenance of the 100 year storm floodway associated with a major drainage facility or natural water course are to be provided to the TRI Center. Improved vehicular access in accordance with TRI Center standards shall be provided when determined necessary by the TRI Center Engineer.

8. Surface drainage from any developed area shall not cross any property line except by way of a natural watercourse, major drainage facility, an approved drainage system within a public storm drain easement, or a permanent surface drainage easement.

9. Storm drain facilities shall be extended with a development to adjacent undeveloped properties for future extensions in accordance with approved drainage plans, unless otherwise approved by the TRI Center Engineer.

10. Existing surface drainage from adjoining property shall be perpetuated through the development or other means of disposal provided acceptable to the TRI Center Engineer.

11. Minimum pipe diameter for any public storm drain shall be 10 inch except for individual catch basin leads not exceeding 80 feet in length which may be 8 inch min. diameter.

12. Lining for drainage channels shall conform to the following requirements:

    a. Design velocity Less Than 10 FPS: Channel lining of non-eroding, long life, low maintenance material as approved by the TRI Center Engineer. Side slopes 3:1 maximum unless otherwise approved by the TRI Center Engineer.

    b. Design velocity 10 to 15 FPS: Channel lining of loose rock riprap sized for velocity. Side slopes 2:1 maximum.

    c. Design Velocity Greater Than 15 FPS: Channel lining of concrete or an engineered equivalent.

13. Corrugated metal pipe for public improvements is preferred.

14. Storm drain waters piped to a major drainage facility shall be rip rapped from the outlet to the bottom of the channel in the direction of flow. Channel modifications for erosion control shall be designed so that the receiving channel or entering channel will contain the flows without erosion.

15. Constructed drainage facilities may be open channel construction in accordance with TRI Center Standards.

16. Standard headwalls shall not be required on the inlet and outlet of all public pipe culverts. For pipes up to and including 72 inches in diameter: the design, size and material used shall comply in all cases with TRI Center Standards.

17. Trash racks shall not be required at the upper end of all closed public conduits as approved by the TRI Center Engineer.

18. Reinforced concrete interceptor swales may be provided along the top of retaining walls and cut slopes to intercept drainage. Discharge shall be into an approved drainage facility.

19. Manholes for public improvements shall be located at junction points, changes in horizontal or vertical alignment exceeding the maximum allowable pipe deflection, changes in conduit size and at the end of public lines unless approved otherwise by the TRI Center Engineer. When permitted by the TRI Center Engineer, pipe may be placed on curves (horizontal and vertical) and shall meet manufacturer's recommendations for curved alignment. All curves, radii, length of pipe joints, and types of pipe shall be shown on the plans. Manholes shall be spaced at intervals not greater than 350 feet for pipe sizes of 21 inches and smaller and at 600 feet maximum

spacing for pipe sizing of 24 inches and larger, unless otherwise approved by the TRI Center Engineer.

20. Catch basins shall be installed at low points of vertical curves, at all major street intersections, and at sufficient intervals to intake the peak flow for the 5 year return storm runoff such that flows will not prohibit one way emergency traffic for more than one hour traffic or flood adjoining property. In no instance shall the depth of water extend more than 12" measured at the centerline of the roadway. Catch basins may tie into each other unless otherwise required by the TRI Center Engineer. Flow along gutters and into inlets shall be computed by the rational method using coefficients based on zoning and ultimate future development. Surtraps or other flow inhibiting devices shall not be installed within any catch basins.

21. Drainage structures under and or through roadway fills shall be designed to carry the runoff generated by the 50 year storm from fully developed conditions within the watershed, based on maximum density and in accordance with current zoning.

22. Storm drain easements for public improvements shall be determined by pipe width, required trench clearance, and excavated trench side slopes not less than 1:1 horizontal to vertical, unless approved by the TRI Center Engineer.

23. Reinforced concrete valley gutters for public improvements may be placed at street intersections.

24. All impermeable on-site private drainage may be contained by Portland Cement concrete curb and gutter or longitudinal valley gutter to TRI Center standards. However, other methods are preferred.

25. Drainage may be diverted from one major drainage facility to another with TRI Center Engineer approval.

Section 4. **Lot Drainage Swales (Private)**.

1. Surface drainage swales collecting runoff from the area of 2 or more parcels be paved in accordance with TRI Center Standards and shall be maintained and perpetuated by the Owners. Paving is not required for common side lot swales.

2. Standard lot line drainage swales are to be designed to carry the waters generated by a 100 year frequency storm.

ARTICLE IX
STREET ENCROACHMENTS AND EXCAVATIONS

Section 1. **Scope And Applicability**.

This Article applies to any temporary encroachment on county rights-of-way, including all excavations within county rights-of-way. This Article is not applicable to encroachments or excavations of federal or state highways, which require approvals of federal or state authorities, as the case may be.

Section 2. **Traffic Control Requirements**.

All encroachments within public right-of-way shall be performed in accordance with the latest editions of the Manual on Uniform Traffic Control Devices and the Nevada Department of Transportation, Work Zone Traffic Control Handbook, including all exceptions as listed in Subsection 3.3 below. Proper and adequate traffic control shall be in place prior to commencement of any activity.

Section 3. **Application**.

Subsection 3.1 Form Of Request. Request for permission to use public right-of-way under this article shall be made in writing to the Storey County Building Department, on the application form provided for such purpose. The application, when approved by the Director of the Building Department ("Director") or his designee, will constitute the permit for such work. Traffic control plans shall only be required for work on collectors, arterials and all detours. These traffic control plans must be approved by the Director or his designee prior to any encroachment into the public right-of-way.

Subsection 3.2 Advance Notice. In order to ensure notification of affected properties, application shall be made a minimum of 48 hours in advance for complete closures of arterial or collector streets. For all other encroachments, the application shall be made a minimum of 24 hours in advance of the encroachment, except for emergency situations where immediate action is necessary. Applications for emergency operations shall be filed by the next business day after the encroachment occurs, whether the emergency work is completed or not.

Subsection 3.3 Exceptions.

(i) Encroachments that occur on and do not expand beyond the limits of sidewalks, parking lanes, or local streets that are not part of the county's major street system, are excused from the usage fee requirements of this article.

(ii) Firms with valid county or state public works contracts, or performing public utility work for a government entity or for a utility company (public or private), are excused from the usage and application fee requirements of this section.

(iii) Firms with valid county public works contracts are exempt from the usage fee, application requirement, and application fee because of the existing internal review of traffic control plans.

Section 4. Fees.

Subsection 4.1 Amount. The encroachment permit application shall be accompanied by an application fee of $100.00.

Subsection 4.2 Work Beginning Early. If the encroachment begins before a permit is issued, all fees shall be double the normal fees incurred up to the time when the permit is actually issued, unless the encroachment is of an emergency nature, as determined by the Director.

Subsection 4.3 Exemption. An applicant who has a franchise or easement granting it the right to use the county's streets, alleys, public ways and public grounds shall not be required to pay a permit application fee to exercise the rights granted by the franchise.

Subsection 4.4 Usage Fee. A usage fee shall be charged for any encroachment greater than 40 hours in length for each project, which shall be based on the extent of traffic disrupted, the duration of the encroachment, the times of day, and/or the amount of right-of-way used. A separate fee shall be charged for each street blocked. Only affected county right-of-ways shall have usage fees charged. The daily usage fee schedule is as follows:

Daytime Work or Continuous Operation (After 40 Hours For Each Project):				
	Fees For Number Of Lanes Blocked			
	1	2	3	4+
Arterial/Expressway	$ 80.00	$160.00	$400.00	$800.00
Collector	$ 20.00	$ 40.00	$100.00	$200.00
Night Time Closures Between 6 PM - 6 AM Only:				
	Fees For Number Of Lanes Blocked			
	1	2	3	4+
Arterial/Expressway	$ 10.00	$ 20.00	$ 50.00	$100.00
Collector	$ 2.50	$ 5.00	$ 12.50	$ 25.00

Section 5. **Hours Of Work**.

Subsection 5.1 Limits. The Director or his designee may limit or restrict traffic interference on arterials or collectors to non-peak traffic hours. The Director or his designee may also limit or restrict traffic interference during other hours if special circumstances exist.

Subsection 5.2 Delay. The Director or his designee may delay requested encroachments in order to minimize the inconvenience to the public.

Section 6. **Basis For Denial Of Application**.

The Director may deny an encroachment permit application if in his judgment the encroachment could result in intolerable congestion, accident potential or hazard to workmen. The decision of the Director may be appealed to the Board of County Commissioners. Appeals shall be by written notice and filed at the County Clerk's office within ten (10) days after the notice of denial.

Section 7. **Excavation Work**.

Subsection 7.1 Interference With Traffic. No opening or excavation in any street shall extend beyond the centerline of the street without providing adequate traffic facilities across the opened or excavated portion of the street so as to cause as little inconvenience as possible to the general public.

Subsection 7.2 Interference With Existing Facilities. No excavation shall interfere with any existing facilities without the consent of the owner of the facility. Pipe drains, culverts, sewer

lines, signal conduits or other facilities shall not be disturbed without the approval of the owner thereof, and the permittee will do everything necessary to support, sustain and protect the facilities. If facilities are damaged, they shall be repaired at the permittee's expense.

Subsection 7.3 Disturbance Of Monuments. Monuments of concrete, iron or other lasting material set for the purpose of locating or preserving the lines of any street or property boundary, or a precise survey reference point or a permanent survey bench mark shall not be removed or disturbed or caused to be removed or disturbed unless permission to do so is first obtained in writing from the Director.

Subsection 7.4 Protection Of Adjoining Properties. The permittee shall at all times and at its sole expense preserve and protect from injury any properties adjoining the work.

Subsection 7.5 Interference With Drainage System. When work performed by the permittee interferes with the established drainage system of any street, provision shall be made by the permittee to provide proper drainage to the satisfaction of the Director.

Subsection 7.6 Removal Of Material From Street. When any earth, gravel or other excavated material is caused to roll, flow or wash upon any street, the permittee shall cause the same to be removed from the street within twenty-four (24) hours after deposit. If the earth, gravel or other excavated material so deposited is not removed, the Director may cause such removal and the cost incurred shall be paid by the permittee.

Subsection 7.7 Barriers, Warning Devices. Every permittee shall place around the excavation area such barriers, barricades, lights, warning flags and danger signs as shall be necessary for the protection of the public. Whenever any permittee fails to provide proper safety devices, within a reasonable time after being notified, such devices may be installed and maintained by the Director. The cost incurred shall be paid by the permittee.

Subsection 7.8 Access To Essential Facilities And Private Driveways. Free access must be provided at all times to all private entries, fire hydrants, fire stations, and all other vital and essential public structures, equipment and facilities.

Subsection 7.9 Placement Of Excavated Material. Excavated materials shall be laid neatly along the side of the trench and kept trimmed so a to cause as little inconvenience as possible to public travel. In order to expedite the flow of traffic or to abate a dirt or dust nuisance, the Director may require the permittee to provide toe boards or bins; and if the excavated area is muddy and causes inconveniences to pedestrians, temporary wooden plank walks shall be installed by the permittee as directed by the Director.

Subsection 7.10 Conditions For Granting Permits. In granting any permit, the Director may attach such other conditions thereto as may be reasonably necessary to prevent damage to public or private property or to prevent the operation from being conducted in a manner hazardous to life or property or in a manner likely to create a nuisance. Such conditions may include but shall not be limited to:

(1) Limitations on the hour, the day and the period of the year in which the work may be performed;

(2) Restrictions as to the size and type of excavating equipment;

(3) Designation of routes upon which materials may be transported;

(4) The manner of removal of excavated materials;

(5) Requirements as to the control of dust, nuisance, the cleaning of street, the prevention of noise, and other results offensive or injurious to the neighborhood, the general public, or any portion thereof; and

(6) Regulations as to the use of streets in the course of the work.

Section 8. Backfilling And Restoration After Excavation.

Subsection 8.1 Generally. All pavement cuts, openings and excavations shall be properly made, backfilled and temporarily surfaced by the permittee according to the county specifications. Temporary surfacing must be installed within twenty-four (24) hours after the trench is backfilled.

Subsection 8.2 Temporary Patching. Temporary patching shall be done by the permittee, and it is the responsibility of the permittee to maintain the temporary patch for a period not to exceed sixty (60) days, or until weather conditions permit placement of the permanent patch.

Subsection 8.3 Final Restoration Of Paving Surface. The work of final restoration of the paving surface shall be performed by the permittee under the direction of the Director.

Subsection 8.4 Resurfacing Instead Of Patching. If the Director finds that paving surfaces adjacent to the street opening may be damaged where trenches are made parallel to the street, or where a number of cross trenches are laid in close proximity to one another or where the equipment used may cause such damage, the Director may require a negotiated contribution from the permittee for the resurfacing in place of patching of such street if the total area of the proposed patch or probable damaged area exceeds twenty-five percent (25%) of the total pavement. Such negotiations shall be carried on and contributions agreed upon prior to issuance of a permit. Such contribution shall be in lieu of the standard permit fee.

Subsection 8.5 Performance Of Work Diligently. After the excavation is commenced, the work to be performed under the permit shall be prosecuted with due diligence to completion.

Subsection 8.6 Inspections. The Director shall make such inspections as he may deem necessary of all work authorized by a permit.

Subsection 8.7 Abandonment Of Facilities. If the permittee abandons any facilities within the public area, the Director may require the permittee to remove at his expense, or to reimburse the county for removal of such abandoned facilities.

Subsection 8.8 Depth Of Facilities. The top of any structure of facility, excepting entrances thereto, shall not be placed less than eighteen (18) inches below the surface of public area unless approved by the Director.

Subsection 8.9 Certificate Of Final Inspection. The permittee shall notify the Director in writing upon completion of all work accomplished under the provisions of the permit. Any settlement in a restored area which has occurred within the three (3) year period following completion of the permanent restoration shall be repaired by the permittee, or any expense incurred by the county in correcting such settlement shall be paid by the permittee, unless the permittee submits proof satisfactory to the county that the settlement was not due to defective backfilling.

Section 9. Transfer.

Permits under this Article are not transferable from one person to another and the work shall not be made in any place other than the location specified in the permit.

Section 10. Term.

Work for which a permit has been issued under this Article shall commence within fifteen (15) calendar days after issuance. If not so commenced, the permit shall be automatically terminated unless the permittee applies to the Director for an extension of time within which to commence work, and if such an extension is granted, the original permit shall remain in force for the period of time specified in the extension. Every permit shall expire at the time stated in the permit, at which time the excavation must be closed and brought to grade unless an extension of time is granted by the Director. Permits which terminate may be renewed only upon payment of an additional permit fee as originally required.

Section 11. Revocation.

The Director may revoke any permit for violation of any provision of the permit or provision of this Article.

Section 12. Penalties.

Any person who violates the provisions of this article shall be subject to a $200.00 penalty for each day of violation, in addition to any other fees charged under this article.

Section 13. Violations.

Subsection 13.1 Unpermitted Work To Cease. If an encroachment into the public right-of-way is discovered without an approved encroachment permit, all work shall immediately cease if ordered by the Director or his designee, until the proper application is filed and such permit is approved. The Director, at his discretion, may order all materials and equipment removed from the public right-of-way until the permit is obtained.

Subsection 13.2 Other Violations. If the permitee violates the terms of the encroachment permit, the Director or his designee shall notify the permitee and indicate what corrections are necessary. Safety hazards shall be corrected immediately, and other violations shall be corrected within 24 hours. Failure of the permitee to correct such violations during such time period shall be sufficient authorization for the county to remove the permitee from the public right-of-way until all penalties are paid and new traffic control plan is approved by the Director and successfully implemented.

Section 14. Insurance.

Before a permit shall be issued under this article, any applicant, with the exception of all government entities and utilities, shall file with the County Clerk, upon review and approval of the District Attorney, a Certificate of Insurance showing a minimum combined single limit comprehensive liability insurance policy of One Million Dollars ($1,000,000.00), said policy to include but not be limited to collapse and underground damage, if excavation work is to be performed.

Standard Certificates of Insurance must contain the following requirements:

1. General Liability:

Bodily Injury	$1,000,000.00 minimum
Property Damage	$1,000,000.00 minimum
Bodily Injury & Property Damage Combines	$1,000,000.00 minimum
Automobile Liability	$1,000,000.00 minimum

2. The Storey County must be named as an Additional Insured.

3. The thirty (30) day cancellation period must be absolute and unequivocal. Any wording to the effect that failure to notify the Storey County relieves the insurance carrier of responsibility is unacceptable and will not be approved.

   The cancellation clause must read as follows:

   Should any of the above described policies be cancelled before the expiration date thereof, the issuing company will mail thirty (30) days written notice to the below named certificate holder.

4. The following language or substantially similar terms must to be included in the Certificate of Insurance for Description of Operations:

Excavations within public property.

CONTRACTOR NAME:_____
ADDRESS:_____
PHONE NUMBER:_____
FAX NUMBER:_____
MAILING ADDRESS IF DIFFERENT FROM ABOVE:_____
_____
COUNTY BUSINESS LICENSE NUMBER:_____

ENCROACHMENT PERMIT APPLICATION

Storey County Public Works
110 Toll Road - P.O. Box 526
Virginia City, Nevada 89440
Phone: (775) 847-0958 Fax: (775) 847-0947

To All Applicants:

Storey County Public Works Department requires any person performing work within a county right of way to first obtain encroachment and excavation permits. The permits have now been combined into one application form and will be issued simultaneously. Timely processing of any permit is predicated upon the completeness of the information required on the application as well as receipt and acceptance of the proper insurance.

Date of Application:	Time:	Work Start Date:
Contractor:	Contractor's Rep:	
Phone:	Fax:	Contractor's License #:
Address:		
Doing Work For:		Phone:
Address:		
Work LOCATION:		
Exact address and/or Street being worked on and distance from nearest cross street or landmark.		
DESCRIPTION of Work (*include whether work involves excavation or simply occupying the right-of-way*):		

Lineal feet of curb and gutter?	Lineal feet of sidewalk being removed?
Dimensions of asphalt being removed?	Asphalt depth, if known?
Longitudinal Cut?	Transverse Cut?
Arterial/Collector?	Is work totally within a parking lane?
Is work within 400' of signalized intersection?	Traffic Loops affected?
Are there any manholes, valves or survey monuments that will have to be raised to grade when patched?	
Are there any manholes, valves or survey monuments that will have to be raised to grade when patched? If yes, how many of each?	
Does the work involve installing, removing or repairing a sanitary sewer lateral?	
Will work be completed in fourteen (14) calendar days?	If no, how many?
Are there current building permits for this location?	If yes, permit #:
Is this part of a larger project or contract, such as a new building, etc.? If so, Name of Project and Owner:	
Engineer of Record (EOR):	

 Date: _____

Contractor:	Work Location:

TRAFFIC CONTROL

Are any traffic lanes being closed?_____ If so, how many?_____ How long?_____

Encroachment permit applications for full lane closures on arterial or collector streets shall be submitted a minimum of 48 hours prior to said lanes being closed.

Provide a detailed sketch of the work area and proposed traffic control plan to be utilized. Traffic control shall conform to the NDOT Work Zone Traffic Control Handbook (latest edition) and the M.U.T.C.D. (latest edition). Please attach any additional sheets necessary to show the proposed traffic control plan.

DOLLAR VALUE OF WORK BEING PERFORMED IN R/W: $ _____

APPLICANT's AUTHORIZED *SIGNATURE*: _____

PRINTED NAME: _____

AN ENCROACHMENT PERMIT WILL NOT BE VALID UNTIL THE ORIGINAL PERMIT FORM IS SIGNED BY THE APPROPRIATE PARTY AND THE APPLICABLE FEE HAS BEEN PAID. ANY WORK (EXCEPT IN EMERGENCY SITUATIONS) COMMENCED PRIOR TO THE PERMIT BEING ISSUED WILL BE ASSESSED MONETARY PENALTIES AND/OR CITED, AND THE WORK IN QUESTION MAY BE REQUIRED TO BE REMOVED. PLEASE CALL (775) 849-0958 IF YOU NEED ASSISTANCE TO COMPLETE THIS APPLICATION.

For Official Use ONLY

ENCROACHMENT PERMIT #: _____

Encroachment Base Fee	$ 100.00	
Encroachment Usage Fee	$_____	
Excavation Base Fee	$ 100.00	
Total Estimated Fee	$_____	***Calculated By:*** _____
Penalty Fees (*if any*)	$_____	

Tahoe Reno Industrial Center
Standard Detail

SPECIFICATIONS FOR TRENCH SLURRY BACKFILL

TRENCH SLURRY BACKFILL SHALL CONSIST OF A FLUID, WORKABLE MIXTURE OF AGGREGATE, CEMENT AND WATER.

AT THE OPTION OF THE CONTRACTOR, TRENCH SLURRY BACKFILL MAY BE USED AS STRUCTURAL BACKFILL FOR PIPE, EXCEPT THAT TRENCH SLURRY BACKFILL SHALL NOT BE USED AS STRUCTURAL BACKFILL FOR ALUMINUM OR ALUMINUM-COATED PIPE.

WHEN TRENCH SLURRY BACKFILL IS USED FOR STRUCTURAL BACKFILL, THE WIDTH OF THE EXCAVATION SHOWN ON THE PLANS MAY BE REDUCED SO THAT THE SIDE CLEAR DISTANCE BETWEEN THE OUTSIDE OF THE PIPE AND THE SIDE OF THE EXCAVATION, ON EACH SIDE OF THE PIPE, IS A MINIMUM OF 6 INCHES FOR PIPES UP TO AND INCLUDING 42 INCHES IN DIAMETER OR SPAN, ONE FOOT FOR PIPES OVER 42 INCHES IN DIAMETER OR SPAN.

TRENCH SLURRY BACKFILL SHALL BE PLACED ONLY FOR THE PORTION OF THE STRUCTURAL BACKFILL BELOW THE ORIGINAL GROUND OR THE GRADING PLANE OR THE TOP OF EMBANKMENT PLACED PRIOR TO EXCAVATING FOR THE PIPE. WHERE NECESSARY, EARTH PLUGS SHALL BE COMPACTED AS REQUIRED AT EACH END OF THE PIPE PRIOR TO PLACING BACKFILL IN A MANNER THAT WILL COMPLETELY CONTAIN THE SLURRY IN THE TRENCH.

TRENCH SLURRY BACKFILL SHALL BE PLACED IN A UNIFORM MANNER THAT WILL PREVENT VOIDS IN, OR SEGREGATION OF, THE BACKFILL, AND WILL NOT FLOAT OR SHIFT THE PIPE. FOREIGN MATERIAL WHICH FALLS INTO THE TRENCH PRIOR TO OR DURING PLACING OF THE TRENCH SLURRY BACKFILL SHALL BE IMMEDIATELY REMOVED.

BACKFILLING OR PLACING ANY MATERIAL OVER TRENCH SLURRY BACKFILL SHALL NOT COMMENCE UNTIL AT LEAST FOUR HOURS AFTER THE TRENCH SLURRY BACKFILL HAS BEEN PLACED, EXCEPT THAT WHEN CONCRETE SAND IS USED FOR THE AGGREGATE AND THE IN-PLACE MATERIAL IS FREE DRAINING, BACKFILLING MAY COMMENCE AS SOON AS THE SURFACE WATER IS GONE. TRENCH SLURRY BACKFILL MAY BE USED AS A SUBSTITUTE FOR AGGREGATE BASE WHEN INSTALLED PROPERLY.

TRENCH SLURRY BACKFILL FOR PIPE WILL BE CONSIDERED STRUCTURAL BACKFILL FOR COMPENSATION PURPOSES.

PORTLAND CEMENT SHALL MEET THE FOLLOWING REQUIREMENTS:

CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO THE PROVISIONS IN STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SECTION 202.03 "PORTLAND CEMENT".

TYPE II CEMENT SHALL MEET THE REQUIREMENTS OF ASTM C150. ALL OTHER CEMENTS SHALL MEET THE REQUIREMENTS OF AASHTO M35.

MIXING WATER SHALL MEET THE FOLLOWING REQUIREMENTS:
WATER USED FOR TRENCH SLURRY BACKFILL SHALL BE FREE FROM OIL. SALTS AND OTHER IMPURITIES WHICH COULD HAVE AN ADVERSE EFFECT ON THE QUALITY OF THE BACKFILL MATERIAL.

CONCRETE SAND SHALL MEET THE FOLLOWING REQUIREMETNS:
AT THE OPTION OF THE CONTRACTOR, AGGREGATE SHALL BE EITHER:

1. MATERIAL SELECTED FROM EXCAVATION, IMPORTED MATERIAL, OR A COMBINATION THEREFORE, WHICH IS FREE OF ORGANIC MATERIAL AND OTHER DELETERIOUS SUBSTANCES AND CONFORMS TO THE FOLLOWING GRADING REQUIREMENTS:

SIEVE SIZES	PERCENTAGE BY WWEIGHT PASSING SIEVE
1 – ½ INCH	100
1 INCH	80 - 100
¾ INCH	60 - 100
3/8 INCH	50 - 100
NO. 4	40 - 100
NO. 100	2 - 40
NO. 200	2 - 10

2. COMMERCIAL QUALITY CONCRETE SAND WHICH CONFORMS TO THE FOLLOWING GRADE REQUIREMENTS.

SIEVE SIZES	PERCENTAGE BY WEIGHT PASSING SIEVE
3/8 INCH	100
NO. 4	95 - 100
NO. 8	80 - 100
NO. 16	50 - 85
NO. 30	25 - 60
NO. 50	10 - 30
NO. 100	2 - 10

MIXING:
THE AGGREGATE, CEMENT AND WATER SHALL BE PROPORTIONED BY WEIGHT. 94 POUNDS OF CEMENT (1 SACK) SHALL BE USED FOR EACH CUBIN YARD OF MATERIAL PRODUCED. THE WATER CONTENT SHALL BE SUFFICIENT TO PRODUCE A FLUID, WORKABLE MIX THAT WILL FLOW AND CAN BE PUMPED WITHOUT SEGREGATION OF THE AGGREGATE WHILE BEING PLACED.

MATERIALS FOR TRENCH SLURRY BACKFILL SHALL BE THOROUGHLY MACHINE-MIXED IN A PUGMILL, ROTARY DRUM, OR OTHER APPROVED MIXER. MIXING SHALL CONTINUE UNTIL THE CEMENT AND WATER ARE THOROUGHLY DISPERSED THROUGHOUT THE MATERIAL. TRENCH SLURRY BACKFILL SHALL BE PALCED IN THE WORK WITHIN ONE HOUR AFTER MIXING OR IT SHALL BE REJECTED.

COMPRESSIVE STRENGTH:

100 PSI IN 28 DAYS.

GENERAL NOTES:

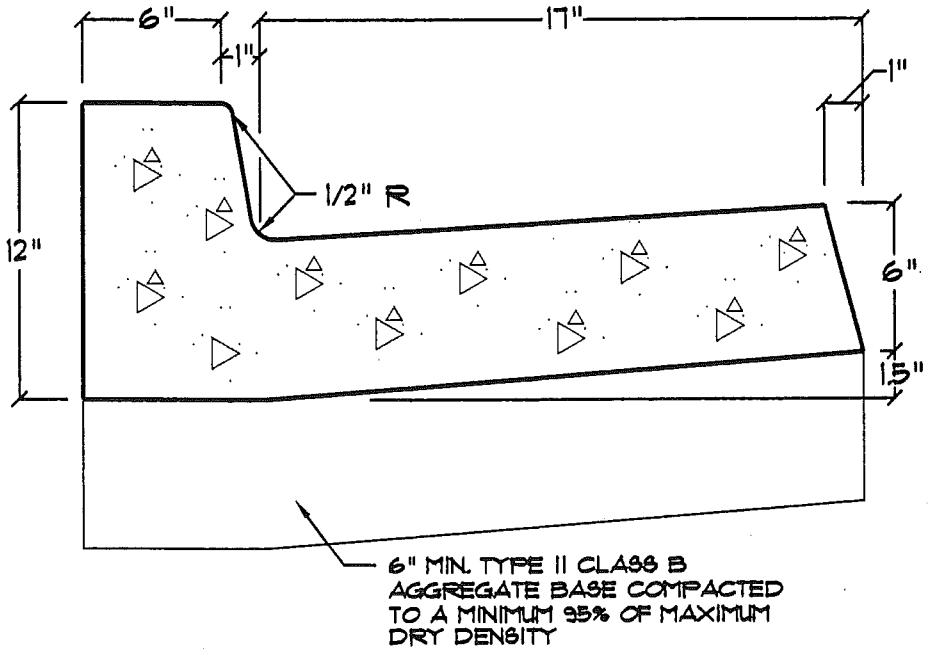
TRENCH SLURRY BACKFILL

1. ONE SACK MIX MAY BE USED AS A SUBSTITUTE FOR TYPE 2 BASE.

2. NO LABORTORY TESTS ARE REQUIRED IF THE CONTRACTOR USES CONCRETE SAND AS AGGREGATE – CONTRACTOR WILL BE REQUIRED TO SUBMIT MIX DESIGN PRIOR TO PALCEMENT. THE INSPECTOR WILL USE THE BATCH TICKET AS PROOF OF THE ONE SACK MIX. IF REQUIRED, OCCASIONAL COMPRESSIVE STRENGTH TESTS AND AGGREGATE GRADATIONS MAY BE PERFORMED.

3. ONE SACK MIX MAY BE USED AS BEDDING, IF APPROVED BY THE APPROPRIATE UTILITY COMPANY.

Tahoe Reno Industrial Center
Type 1 P.C.C. Curb & Gutter



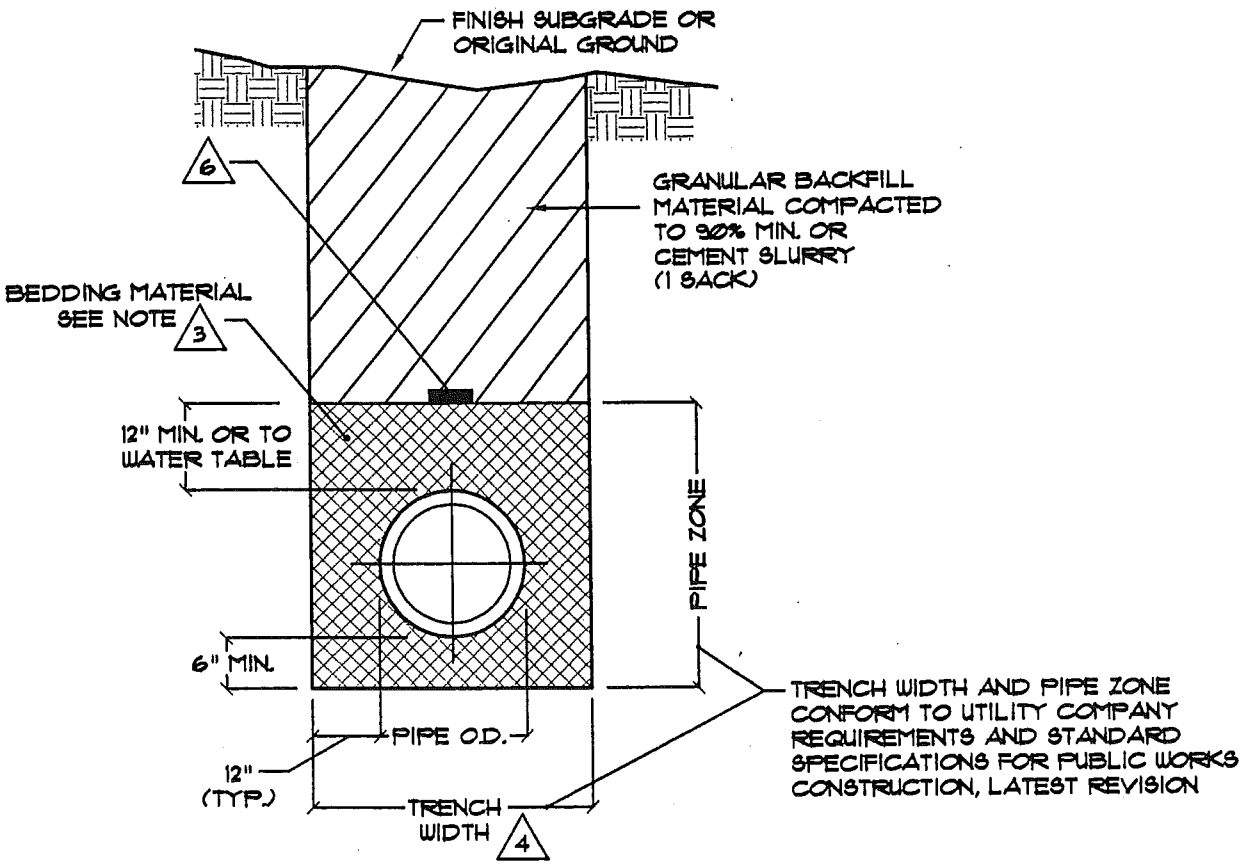
NOTES:

1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 P.S.I MIN. COMPRESSIVE STRENGTH @ 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6.0% ± 1.5% SLUMP AT 1 TO 4 INCHES.

2. EXPANSION JOINTS 1/2-INCH WIDE SHALL BE LOCATED IN CURBS AND GUTTERS AT EACH SIDE OF STRUCTURES, AT THE ENDS OF ALL CURB RETURNS, AND ABUTTING HARDENED IN-PLACE CURB AND GUTTER, EXCEPT THAT EXPANSION JOINTS SHALL NOT BE INSTALLED WITHIN 20 FEET OF AN ISLAND NOSE. EXPANSION JOINTS SHALL BE 1/2-INCH THICK, SHAPED TO THE CROSS SECTION OF THE CURB AND GUTTER, AND CONSTRUCTED AT RIGHT ANGLES TO THE CURB AND GUTTER. JOINT FILLER MATERIAL SHALL CONFORM TO SECTION 202.10. WEAKENED PLANE JOINTS SHALL BE EVERY 10 FEET.

3. CURB AND GUTTER SECTIONS SHALL BE PLACED SEPARATELY FROM SIDEWALK SECTIONS.

Tahoe Reno Industrial Center
Trench Excavation and Backfill



NOTES:

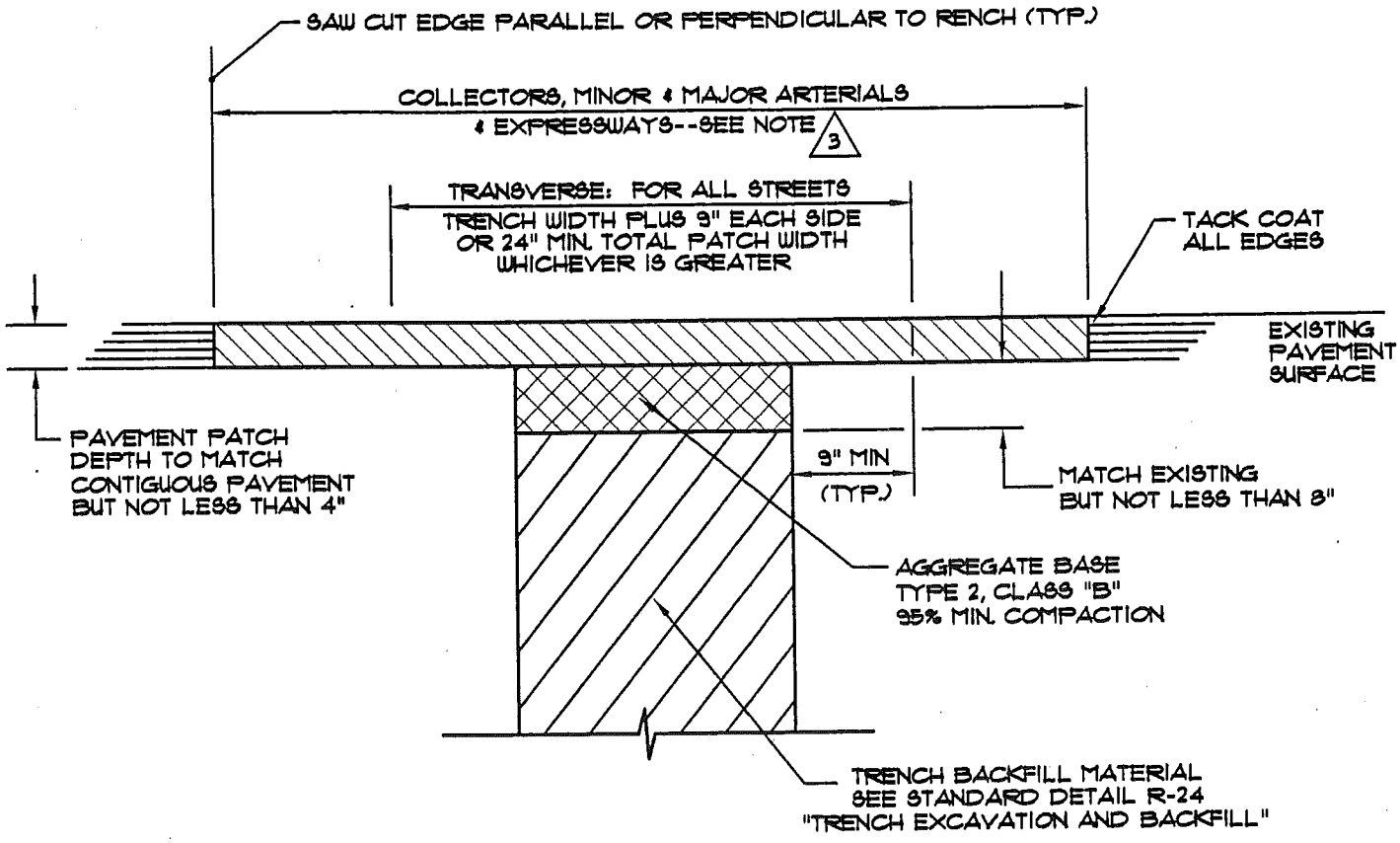
1. A PERMIT MUST BE OBTAINED PRIOR TO CUTTING ANY STREET.
2. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST REVISION.

3. BEDDING MATERIAL SHALL CONFORM TO OWNING UTILITY COMPANY REQUIREMENTS FOR TRAFFIC/ELECTRICAL CONDUIT TRENCHES LESS THAN 12" IN WIDTH, INCLUDING VERMIER TRENCHES, BEDDING USED AS AN ALTERNATE TO CLASS "A", "B", OR "C" MATERIAL WITH WRITTEN APPROVAL FROM THE CITY ENGINEER FOR EACH SPECIFIC APLICATION.

4. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A.-REQUIREMENTS. SHORING OR SLOPED CUT MAY BE NECESSARY, BUT THERE WILL BE NO PAYMENT FOR ADDITIONAL EXCAVATION, BEDDING, BACKFILL, OR SHORING.
5. 4" VERMIER TRENCHES FOR CONDUIT SHALL BE LOCATED A MINIMUM OF 9" FROM GUTTER LIP.

6. PIPE TAPE IDENTIFICATION OF UTILITY SHALL BE INSTALLED.

Tahoe Reno Industrial Center
Permanent Bituminous Pavement Patch



NOTES:

1. A PERMIT MUST BE OBTAINED PRIOR TO CUTTING ANY STREET.

2. IF SAWCUT IS WITHIN TWO (2) FEET OF AN EXISTING PAVEMENT EDGE OR EXISTING PAVEMENT PATCH, REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE ENTIRE SECTION.

3. LONGITUDINAL TRENCH PATCH WIDTH:

   A. FOR COLLECTORS, MINOR AND MAJOR ARTERIALS AND EXPRESSWAYS: IF SAWCUT EDGES FOR LONGITUDINAL OR TRANSVERSE EXCAVATIONS FALL WITHIN A TRAVEL LANE, SAWCUT SHALL BE EXTENDED TO, AND REMOVAL MADE TO EDGE OF THE TRAVEL LANE± OR THE FULL DEPTH PATCH SHALL BE MADE PER THE SPECIFICATIONS FOR TRANSVERSE PATCHES AND THE ENTIRE TRAVEL LANE ROTOMILLED TO A DEPTH OF TWO (2) INCHES AND OVERLAYED WITH TWO (2) INCHES OF BITUMINOUS PLANTMIX AS DIRECTED BY THE ENGINEER.

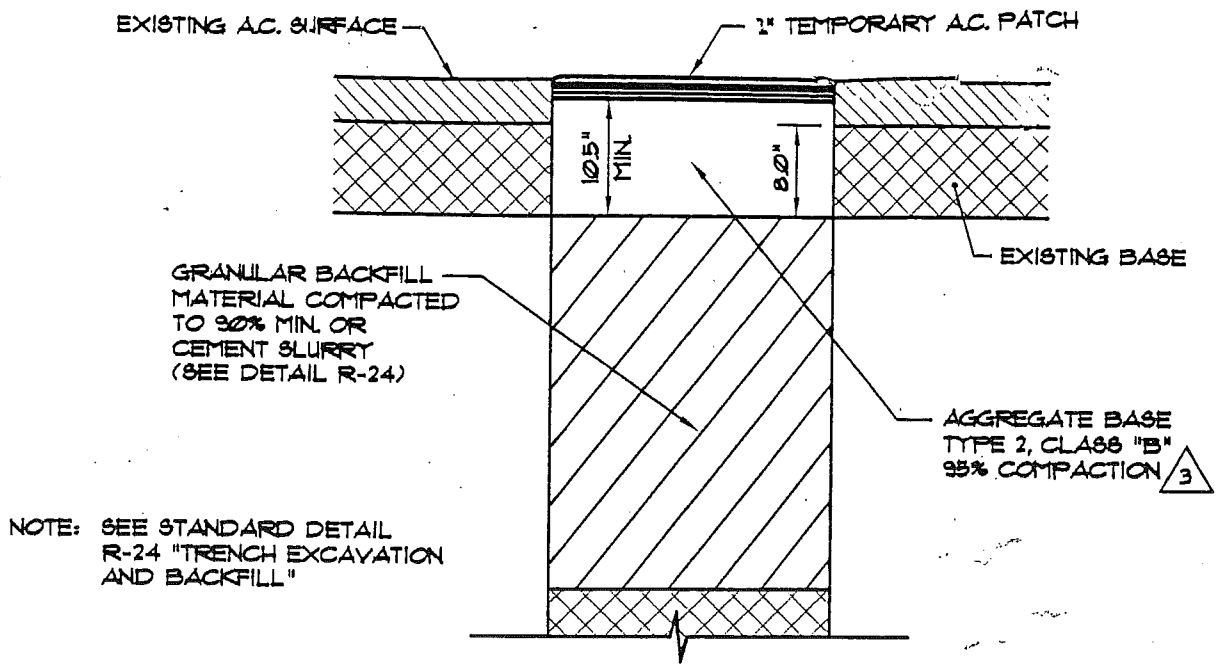
4. 4" VERMIER TRENCHES FOR CONDUIT SHALL BE LOCATED A MINIMUM OF 9" FROM GUTTER LIP AND SHALL BE PATCHED AS PER THE ABOVE DETAIL.

5. AGGREGATE BASE AND BITUMINOUS PAVEMENT SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST REVISION.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF LOOP DETECTORS, ADJUSTMENT OF UTILITIES AND SURVEY MONUMENTS TO GRADE AND INSTALLATION OF TEMPORARY PAVEMENT MARKINGS.

7. FOR P.C.C. CURB REPLACEMENT SAWCUT EXISTING PAVEMENT 18 INCHES MIN. FROM GUTTER LIP LINE, REMOVE AND REPLACE PAVEMENT TO SAWCUT EDGES. CONCRETE MAY BE POURED NEAT AGAINST EXISTING EDGE OF ASPHALT IF APPROVED BY THE CITY ENGINEER.

Tahoe Reno Industrial Center
Temporary Trench Patch



TEMPORARY PATCH
(TO BE PERFORMED BY PERMITTEE)

NOTES:

1. PRIOR TO EXCAVATION, THE OUTLINE OF THE TRENCH SHALL BE VERTICALLY CUT FULL DEPTH THRU THE EXISTING ASPHALT SURFACE WITH A SAW, OR AN ASPHALT SPADE OR EQUIPMENT APPROVED BY THE ENGINEER.

2. CARE SHALL BE EXERCISED TO PREVENT SLOUGHING AND OVERBREAK. IF THE TRENCH SLOUGHS, THE SURFACE SHALL BE WIDENED TO ELIMINATE THE UNDERMINED SECTION OF ASPHALT.

3. TYPE 2, CLASS "B", AGGREGATE BASE SHALL BE COMPACTED TO A THICKNESS OF AT LEAST 10-1/2" OR A DEPTH OF 8" BELOW THE BOTTOM OF THE EXISTING PAVEMENT, WHICHEVER IS GREATER.

4. A TEMPORARY PATCH OF COLD MIX ASPHALT CONCRETE SHALL BE PLACED AND COMPACTED. THE COMPACTED PATCH SHALL BE APPROXIMATELY 1/8" TO 1/4" ABOVE THE LEVEL OF THE ADJACENT PAVEMENT. IF NOT PATCHED WITHIN 24 HOURS AFTER BACKFILLING, A.R.C. MAY PATCH AND BACK-CHARGE THE PERMITTEE FOR ALL COSTS.

5. COMPACTION OF BACKFILL BASE AND A.C. TEMPORARY PATCH SHALL BE PERFORMED WITH APPROVED MECHANICAL TAMPERS. EQUIPMENT WHEEL ROLLING IS NOT PERMITTED.

6. ENTIRE AREA SHALL BE CLEANED OF ALL DIRT, DUST, DEBRIS, ETC. BEFORE LEAVING SITE. ANY SITE LEFT UNCLEANED WILL BE CLEANED BY A.R.C. AND ALL COSTS WILL BE BACK-CHARGED TO THE PERMITTEE.

7. TUNNELING UNDER CURB AND GUTTER OR SIDEWALK IS NOT PERMITTED. COMPLETE REMOVAL REQUIRED TO THE NEAREST CONSTRUCTION OR EXPANSION JOINT OUT SIDE THE TRENCH WIDTH.

8. ALL EXCAVATIONS SHALL BE COMPLETE OR BACKFILLED AT THE END OF THE DAY.